United Nations E/CN.9/2002/2

Economic and Social Council

Distr.: General
14 December 2001

Original: English

Commission on Population and Development
Thirty-fifth session
1-5 April 2002
Item 3 of the provisional agenda*
Follow-up actions to the recommendations of the International Conference on Population and Development

Concise report on world population monitoring, 2002: reproductive rights and reproductive health with special reference to human immunodeficiency virus/acquired immunodeficiency syndrome (HIV/AIDS)

Report of the Secretary-General

Summary

The present report has been prepared in accordance with the terms of reference of the Commission on Population and Development and its topic-oriented prioritized multi-year work programme, which was endorsed by the Economic and Social Council in its resolution 1995/55. The Commission, in its decision 2000/1, decided that the special theme for the Commission at its thirty-fifth session in the year 2002 should be "Reproductive rights and reproductive health, with special reference to human immunodeficiency virus/acquired immunodeficiency syndrome (HIV/AIDS)".

The report provides a summary of recent information on selected aspects of reproductive rights and reproductive health and covers topics such as entry into reproductive life; reproductive behaviour; family planning; abortion; maternal mortality and morbidity; sexually transmitted infections; human immunodeficiency virus/acquired immunodeficiency syndrome (HIV/AIDS); and policy issues related to reproductive rights. The preliminary, unedited version of the full report is available as a working paper in document ESA/P/WP.171.

The report was prepared by the Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat with contributions from the World Health Organization and the Joint United Nations Programme on Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome (HIV/AIDS) (UNAIDS).

* E/CN.9/2002/1.

01-70956 (E) 140202

Contents

		Paragraphs	*Page*
	Introduction	1–7	3
I.	Entry into reproductive life	8–31	6
II.	Reproductive behaviour	32–58	14
III.	Family planning	59–90	23
IV.	Abortion	91–121	31
V.	Maternal mortality and morbidity	122–142	40
VI.	Sexually transmitted infections (STIs)	143–163	48
VII.	Human immunodeficiency virus/acquired immunodeficiency syndrome (HIV/AIDS)	164–200	52
VIII.	Reproductive rights	201–224	60
Tables			
1.	Timing and marital context of the initiation of sexual activity among men and women aged 20-24, selected regions		8
2.	Total fertility rate, major areas and regions, from 1970-1975 to 1995-2000		15
3.	Total fertility rates according to women's level of education, selected developing countries		19
4.	Average prevalence of specific contraceptive methods, by major area and region		25
5.	Reported legal abortions, most recent year		33
6.	Legal status of Mifepristone (RU-486)		37
7.	Estimates of maternal mortality by region, 1995		43
8.	Trends in proportion of deliveries assisted by skilled attendants for 53 countries, 1989-1999		46
9.	Estimated prevalence and annual incidence of curable sexually transmitted infections by region, 1999		49
10.	Regional HIV/AIDS statistics and features, end of 2001		53
11.	Regional HIV/AIDS prevalence among young people aged 15-24, end of 2001		56
12.	Government policy towards access to contraceptive methods, by level of development, 1999		61
Figures			
I.	Distribution of countries by region according to average age at marriage for men and women, based on most recent data		12
II.	Age-specific fertility of women aged 15-19, late 1990s		22
III.	Proportion of currently married women whose family planning need for spacing or for limiting births is satisfied, by major area, late 1990s		30
IV.	Adolescent pregnancy outcomes, 1999 or most recent year		36
V.	Trends in maternal mortality, selected countries in Latin America, 1980-1999		44
VI.	Trends in maternal mortality, selected countries in Asia, 1980-1997		44
VII.	Trends in maternal mortality, selected countries in Eastern Europe, 1974-1997		45
Box.	Reproductive rights and reproductive health as defined in the Programme of Action of the International Conference on Population and Development		3

Introduction

1. At the twenty-first special session of the General Assembly for the overall review and appraisal of the implementation of the Programme of Action of the International Conference on Population and Development, held in New York in 1999, Governments affirmed their renewed and sustained commitment to the principles, goals and objectives of the Programme of Action, including those related to reproductive rights and reproductive health (see General Assembly resolution S-21/2, annex).

2. The Programme of Action of the International Conference on Population and Development (United Nations, 1995a, chap. I, resolution 1, annex), held in Cairo in 1994 defined reproductive health in a comprehensive manner to encompass physical, mental and social well-being in all matters relating to the reproductive system, and to its functions and processes (see box). Thus, in contrast with previous approaches that focused on specific aspects of reproductive health, such as safe motherhood, maternal and child health and family planning, the reproductive health approach is concerned, not only with pregnancy-related health issues, but also with health and human rights issues relevant to reproduction and sexuality that arise within and outside the childbearing ages.

Reproductive rights and reproductive health as defined in the Programme of Action of the International Conference on Population and Development[a]

"Reproductive health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity, in all matters relating to the reproductive system and to its functions and processes. Reproductive health therefore implies that people are able to have a satisfying and safe sex life and that they have the capability to reproduce and the freedom to decide if, when and how often to do so. Implicit in this last condition are the right of men and women to be informed and to have access to safe, effective, affordable and acceptable methods of family planning of their choice, as well as other methods of their choice for regulation of fertility that are not against the law, and the right of access to appropriate health-care services that will enable women to go safely through pregnancy and childbirth and provide couples with the best chance of having a healthy infant. In line with the above definition of reproductive health, reproductive health care is defined as the constellation of methods, techniques and services that contribute to reproductive health and well-being by preventing and solving reproductive health problems. It also includes sexual health, the purpose of which is the enhancement of life and personal relations, and not merely counselling and care related to reproduction and sexually transmitted diseases" (chap. VII, para. 7.2).

"Bearing in mind the above definition, reproductive rights embrace certain human rights that are already recognized in national laws, international human rights documents and other consensus documents. These rights rest on the recognition of the basic right of all couples and individuals to decide freely and responsibly the number, spacing and

timing of their children and to have the information and means to do so, and the right to attain the highest standard of sexual and reproductive health. It also includes their right to make decisions concerning reproduction free of discrimination, coercion and violence, as expressed in human rights documents. In the exercise of this right, they should take into account the needs of their living and future children and their responsibilities towards the community. The promotion of the responsible exercise of these rights for all people should be the fundamental basis for government- and community-supported policies and programmes in the area of reproductive health, including family planning. As part of their commitment, full attention should be given to the promotion of mutually respectful and equitable gender relations and particularly to meeting the educational and service needs of adolescents to enable them to deal in a positive and responsible way with their sexuality. Reproductive health eludes many of the world's people because of such factors as: inadequate levels of knowledge about human sexuality and inappropriate or poor-quality reproductive health information and services; the prevalence of high-risk sexual behaviour; discriminatory social practices; negative attitudes towards women and girls; and the limited power many women and girls have over their sexual and reproductive lives. Adolescents are particularly vulnerable because of their lack of information and access to relevant services in most countries. Older women and men have distinct reproductive and sexual health issues which are often inadequately addressed" (chap. VII, para. 7.3).

[a] *Report of the International Conference on Population and Development, Cairo, 5-13 September 1994* (United Nations publication, Sales No. E.95.XIII.18), chap. I, resolution 1, annex.

3. The broad definition of reproductive health implies that the health and survival of infants and children are important indicators of reproductive health. Child survival is viewed as being closely linked, not only to the timing, spacing and number of births, but also to the health of mothers. Adolescence is a period during which the prospects for a healthy reproductive life can be compromised. Major risk factors include premature entry into sexual relationships, multiple partners, early childbearing, high-risk sexual behaviour, unsafe abortion[i] and lack of basic health information and services. Sexually transmitted infections (STIs), especially human immunodeficiency virus (HIV) and acquired immunodeficiency syndrome (AIDS), pose major threats to adolescents. The childbearing ages, which have traditionally been the focus of family planning programmes and maternal and child health programmes, have also become the ages of significant risks of contracting and dying from HIV/AIDS. In contexts where the epidemic is most severe, unprotected heterosexual sex and having sexual relations with multiple partners appear to be the most important factors accounting for the rapid spread of the epidemic (UNAIDS, 2000). The reproductive health approach also recognizes that reproductive health problems can occur well beyond the childbearing years. In women, menopause can trigger many biological and physical changes that may lead to alterations in the skeletal and cardiovascular systems. In men, tumours of the prostate gland are relatively common in the later adult years and can impair sexual function and can

result in death. In both men and women, early sexual initiation and multiple partners increase the risk for reproductive cancers.

4. Since 1994, Governments, civil society and the international community have made efforts to implement the agreements reached in Cairo with respect to reproductive rights and reproductive health. Many countries have also made policy, legislative and institutional changes to better support the implementation of reproductive health programmes. The five-year review and appraisal of the implementation of the Programme of Action of the International Conference on Population and Development showed that important achievements had been made in improving reproductive health (United Nations, 1999a; General Assembly resolution S-21/2, annex). In particular, the broad-based definition of reproductive health is being accepted by an increasing number of countries. The rising use of family planning methods indicates that there is greater accessibility to family planning and that more and more couples and individuals are able to choose the number and spacing of their children. However, the review also showed that, in some countries, progress has been limited and, in some cases, setbacks have occurred. The implementation of reproductive health programmes has been constrained by operational bottlenecks, especially difficulties in integrating reproductive health services into primary health care in a manner that would make such services accessible and affordable to all. The sexual and reproductive health needs of adolescents are not yet adequately addressed under many primary health-care systems and many adolescents do not have access to information and services to protect their health and make choices freely and responsibly (United Nations, 1999b, annex).

5. Although the attainment of reproductive health goals is challenged by a wide variety of factors, perhaps none is more threatening than the global epidemic of HIV/AIDS. HIV/AIDS adds to the high reproductive health burden that many, especially women, carry from diseases related to STIs and reproduction. Infants and young children are also affected by the epidemic either through vertical transmission from their mothers or through breastfeeding, or through orphanhood resulting from the death of infected parents. The special session of the General Assembly on HIV/AIDS, held in New York from 25 to 27 June 2001, thus recognized that the HIV/AIDS epidemic constitutes a global emergency and that it is one of the most formidable challenges to human life and dignity, as well as to the effective enjoyment of human rights (see Assembly resolution S-26/2, containing the Declaration of Commitment on HIV/AIDS).

6. The data needs for evaluating progress made in reproductive rights and reproductive health are large and diverse but considerable progress has been achieved in meeting some of these needs. A large volume of data now exists on aspects of sexual and reproductive health that were previously excluded from investigation, and various population and health surveys have collected information on aspects of reproductive rights, including data on gender roles and expectations, and the prevalence of female genital mutilation and other forms of violence against women. Information has also been collected in some surveys on the presence of symptoms of STIs and knowledge and practices regarding HIV/AIDS. As a result of the continued monitoring by the Joint United Nations Programme on Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome (HIV/AIDS) (UNAIDS), substantial data exist on the levels and trends in HIV prevalence and AIDS mortality worldwide. However, the monitoring of progress with respect to the

reproductive health agenda is still limited by the dearth of information on young adolescents, on the levels and trends in the prevalence of sexually transmitted infections, on maternal mortality and morbidity and on neonatal mortality. Data are also lacking for both men and women on reproductive health beyond the childbearing ages.

7. Within the context of these data limitations, the present report provides an overview of selected aspects of reproductive rights and reproductive health, with special reference to the HIV/AIDS epidemic. The report updates the findings of *World Population Monitoring, 1996* (United Nations, 1998), and adds a specific emphasis on the HIV/AIDS epidemic. *World Population Monitoring, 1996* was the first report monitoring progress in the implementation of the Programme of Action with respect to reproductive rights and reproductive health. The present report covers reproductive rights and reproductive health issues related to entry into reproductive life; reproductive behaviour; family planning; abortion; maternal mortality and morbidity; sexually transmitted infections; HIV/AIDS; and policy issues related to reproductive rights.

I. Entry into reproductive life

8. Entry into reproductive life is a key transition in a person's life and the choices and behavioural patterns acquired during this early stage will typically shape the subsequent life course (United Nations, 1988, 1989, 1998). This transition is marked by critical life events: puberty, sexual initiation, marriage and the onset of childbearing. The timing, sequence and context in which these events take place have immediate and long-term repercussions for individuals' sexual and reproductive health. A recent review of research has documented the health risks of premature sexual initiation and the adverse consequences of early marriage and childbearing (Alan Guttmacher Institute, 1998).

9. International concern about the reproductive health needs of adolescents dates back to the International Conference on Population held at Mexico City in 1984. Among the recommendations adopted at the Conference (United Nations, 1984, chap. I, sect. B), was one that urged Governments to ensure that adolescents received adequate education, including family-life and sex education, and that suitable family planning information and services were available to adolescents (ibid., sect. B.III, recommendation 29). At the International Conference on Population and Development, held at Cairo in 1994, adolescents were identified as a particularly vulnerable group and their reproductive health needs were addressed in a separate section of the Programme of Action (United Nations, 1995a, chap. I, resolution 1, annex, chap. VII, sect. E). In 1999, during the review and appraisal of the implementation of the Programme of Action of the International Conference on Population and Development, the importance of addressing effectively the reproductive and sexual health needs of adolescents was further emphasized (see General Assembly resolution S-21/2, annex, sect. IV.E).

10. The growing concern about the reproductive health of adolescents and youth derives in part from the sheer size of their cohorts. According to *World Population Prospects: The 2000 Revision* (United Nations, 2001a), nearly half of the world population — and 63 per cent in the least developed countries — is currently below age 25, meaning that a large contingent of people will be entering reproductive life

in the near future. The population classified as "youth", between ages 15 and 24, is estimated to be 1 billion and it constitutes nearly 18 per cent of the world population — approximately 14 per cent of the population in the more developed regions and nearly 19 per cent of the population in the less developed regions. A large majority of the world's youth lives in less developed regions: 61 per cent in Asia, 15 per cent in Africa and 10 per cent in Latin America and the Caribbean. In the next decades, the relative weight of this age group in the global population will generally decline, but by the year 2030 the absolute number of men and women aged 15-24 is projected to increase by 17 per cent worldwide, reaching 1.2 billion. The largest increase (84 per cent) will occur in Africa and only in Europe is this age segment of the population expected to decrease. The current and upcoming generations of young people face important challenges, and the size, health and prosperity of the world's future population will partly depend on the success of meeting their educational and reproductive health needs.

Menarche

11. Although menarche is but one part of the sexual maturation process, in some societies it remains an important cultural marker defining girls' exit from childhood and readiness for marriage and childbearing (Mensch, Bruce and Greene, 1998). According to the 1997 Bangladesh Demographic and Health Survey, 5 per cent of women currently aged 20-24 entered marriage before age 12 and 47 per cent before age 15, suggesting that a large proportion of marriages cluster around the onset of menarche. In most of the world, however, educational expansion has led to an increasing dissociation between sexual maturity and marriage and several years separate puberty and the onset of sexual activity and family formation.

12. There is considerable variation in the average age at menarche across countries (Becker, 1993; Morabia and Costanza, 1998). A recent review of 67 countries (Thomas and others, 2001) documents that age at menarche is lower in the more developed regions than in the less developed regions and that it is inversely associated with socio-economic conditions, nutrition and literacy rates. According to this review, the average age at menarche is 13.1 in Europe and Northern America, 13.2 in Latin America and the Caribbean, 13.6 in Oceania, 13.8 in Asia and 14.1 in Africa. Over the past century, age at menarche has fallen significantly in more developed regions — at a rate of two to three months per decade, resulting in an overall secular decline of about three years (Wyshak and Frisch, 1982), but this trend seems to have reached a plateau. In the less developed regions, age at menarche continues to decline, concomitantly with improvements in nutrition and health conditions (Chowdhury and others, 2000).

13. Although it is documented that boys enter puberty about two years later than girls, there is a shortage of trend studies and international comparisons on the timing of puberty for boys, partly due to the lack of standardization regarding the biological markers of the onset of male puberty. There is, however, scattered evidence of a general trend towards earlier puberty also among boys (McCauley and Salter, 1995). Earlier puberty combined with later completion of schooling and later marriage means an increasing separation of the biological and socio-economic landmarks bracketing the transition to adulthood.

Initiation of sexual activity

14. The onset of sexual activity typically takes place during adolescence, a period of growth, experimentation and identity search, during which individuals are particularly vulnerable and in many cases ill-informed with respect to making responsible choices which would not compromise their sexual and reproductive health (Zabin and Kiragu, 1998). Limited access to reproductive health education and services increases their susceptibility to unwanted pregnancy, unsafe abortion and STIs, including HIV/AIDS. Data on young people's sexual behaviour have traditionally been scarce, particularly for men. However, in the past decade, the seriousness and scale of the global HIV/AIDS epidemic have moved the issue of sexual health to the forefront of the research and policy agenda, promoting data collection and the inclusion of men in surveys. As a result of this data-collection effort, there is a growing body of literature that documents the existing worldwide variation in young people's timing and context of sexual initiation (Alan Guttmacher Institute, 1998; Blanc and Way, 1998; Singh and others, 2000; Population Reference Bureau, 2001; World Health Organization, 2001a).

15. Table 1 summarizes survey data on young women's and men's age and marital status at sexual initiation for selected regions. In all regions shown, sexual initiation during adolescence is the predominant pattern among women. The proportion of young women sexually active before age 20 is highest in Africa and in the more developed countries — 79 per cent and 72 per cent respectively– and lowest in Latin America and the Caribbean — 58 per cent. Sexual initiation during the teen years is also the dominant pattern among men. The average proportion of young men who started their sexual activity before age 20 is 69 per cent in Africa and 82 per cent in Latin America and the Caribbean.

Table 1
Timing and marital context of the initiation of sexual activity among men and women aged 20-24, selected regions

		Percentage of men and women sexually active by age 20						
			Before 18			*Ages 18-19*		
Region	*Number of countries*	*All*	*Total*	*Before marriage*	*Within marriage*	*Total*	*Before marriage*	*Within marriage*
Men								
Africa	18	69	48	45	3	21	17	4
Latin America and the Caribbean	6	82	65	63	2	17	15	3
Women								
Africa	25	79	61	31	29	18	9	9
Latin America and the Caribbean	13	58	38	17	21	20	9	11
More developed regions	5	72	50	44	6	22	15	7

Sources: Alan Guttmacher Institute, *Into a New World: Young Women's Sexual and Reproductive Lives* (New York, 1998), p. 51, appendix table 3; and various Demographic and Health Surveys country reports.

Note: Regional averages are unweighted and based only upon available data for that region.

16. For many adolescents, sexual initiation occurs before having adequate information on potential health risks, the skills of self-protection and full access to reproductive health services. This situation is exacerbated when sexual initiation takes place at a very early age. An additional concern is that sexual activity at very early ages is often involuntary or coerced (Heise, Moore and Toubia, 1995; World Health Organization, 2001a). According to recent Demographic and Health Surveys, over one fourth of women currently aged 20-24 had their sexual initiation before age 15 in several African countries: Cameroon, the Central African Republic, Chad, Côte d'Ivoire, Guinea, Liberia, Mali, Mozambique, the Niger and Uganda. In the Asian region, most reproductive health surveys are based on ever-married samples, but the proportion of young women sexually active by age 15 within marriage is nearly one fifth in India and Nepal, and almost one half in Bangladesh. In the Latin American and Caribbean region, sexual initiation before age 15 is relatively uncommon, although 10 to 15 per cent of young women started their sexual activity before that age in the Dominican Republic, Guatemala and Nicaragua. In the more developed regions, the United States of America has an earlier pattern of sexual initiation than the rest of the countries: 15 per cent of young women and 34 per cent of young men experienced their first sexual relationship before age 15 (Singh and others, 2000).

17. The prevalence of sexual initiation before age 18 is also a relevant indicator of reproductive health, because psychological and emotional immaturity is often associated with risk-taking behaviour. In the African region, the proportion of women currently aged 20-24 who initiated their sexual activity before age 18 is over one half in 18 of the 25 countries examined and exceeds 75 per cent in Cameroon, the Central African Republic, Chad, Côte d'Ivoire, Liberia, Mali, Mozambique and the Niger. In the Latin American and Caribbean region, the proportion of young women sexually active before age 18 ranges from 28 per cent in Mexico to 49 per cent in Nicaragua. In all developed countries with available data, except Poland, the proportion of young women sexually active by age 18 exceeds one half. Sexual initiation before age 18 is also common among men worldwide. The proportion of young men sexually active before this age is over one half in 10 of the 18 African countries and in all Latin American countries with available data.

18. As other studies have previously shown (Singh and others, 2000), the data contradict the long-held view that men are generally more sexually precocious than women. The pattern of gender differentials in the onset of sexual activity varies from region to region. In Africa, women tend to have an earlier sexual initiation than men: in 16 of the 18 countries surveyed, a higher proportion of young women than young men are sexually active by age 20. By contrast, in Latin America and the Caribbean, the proportion of young women sexually active by age 20 is significantly lower than the proportion of men.

19. Whereas gender differentials in the timing of sexual initiation are relatively modest and do not follow a consistent pattern across regions, gender differentials regarding the marital context of sexual initiation are generally large and uniform. Regional averages shown in table 1 indicate that among those young women sexually active by age 20, 51 per cent in Africa and 45 per cent in Latin America and the Caribbean experienced this transition within a premarital context. By contrast, the corresponding proportion for males is 90 per cent in Africa and 95 per cent in Latin America and the Caribbean. In Asia, the onset of sexual activity has traditionally been assumed to take place within the context of marriage although,

since most demographic surveys have focused on ever-married women, there are few empirical data on the incidence of premarital activity. Recent studies based on the Asian Young Adult Reproductive Health Surveys (AYARH) confirm that the level of premarital sexual activity is low among young women in the Asian region, compared with other regions, although high among young men (Xenos and others, 2001). In the more developed regions, gender differentials in the marital context of sexual initiation tend to be smaller, since in many countries the onset of sexual activity takes place predominantly prior to marriage for both women and men.

20. A number of studies have shown that education plays an influential role in the timing and context of young people's sexual initiation (Blanc, 2000). The association between women's higher educational level and later onset of sexual activity is well established in sub-Saharan Africa, although the association between education and premarital sexual behaviour varies across countries (Gage and Meekers, 1994). In the Latin American and Caribbean region, differentials in the timing of sexual initiation by educational attainment also tend to be large, particularly between women with primary education and women with secondary education. There is recent evidence, however, that education might affect differently male and female sexual behaviour. In several African and Latin American countries with available data, men with secondary education are more likely to be sexually active by age 18 than men with lower educational attainment.

21. The influence of the family environment on young people's onset of sexual activity is also increasingly acknowledged (Gage, 1998). Parents and other family members usually play a central role in shaping youth's knowledge, values and attitudes, including those related to sexual and reproductive health. Several studies have documented the influential role of family stability (Gomez, 1993), father's presence in the household (Dittus, Jaccard and Gordon, 1997) and parent-teen communication (Hutchinson and Cooney, 1998) on the timing of sexual initiation and the reduction of risk-taking behaviour.

22. With regard to recent trends in sexual initiation, some studies have documented a postponement of the onset of sexual activity in several countries (Blanc and Way, 1998). Expanded education, delayed marriage and increased awareness of the health and social risks of early sexual initiation may account for part of this trend. An examination of countries with survey data available at two points in time confirms the recent trend towards later sexual initiation: in 13 of the 17 countries examined, there has been a decline of the proportion of young women sexually active by age 20. In the more developed countries, a stable pattern prevails. In a review of survey data on sexual behaviour for 12 European countries, Bozon and Kontula (1998) showed that after two decades of decline, the timing of women's sexual initiation has stabilized in most countries since the early 1980s.

23. Although age at sexual initiation is rising in many countries, increases in age at marriage are generally greater, resulting in a widening gap. As a consequence, the prevalence of premarital sexual activity has generally increased, both in the more developed regions and in some less developed regions (Carr, Way and Smith, 2001). In Colombia, for instance, the proportion of young women sexually active prior to marriage by age 20 increased from 35 per cent in 1995 to 49 per cent in 2000.

Marriage

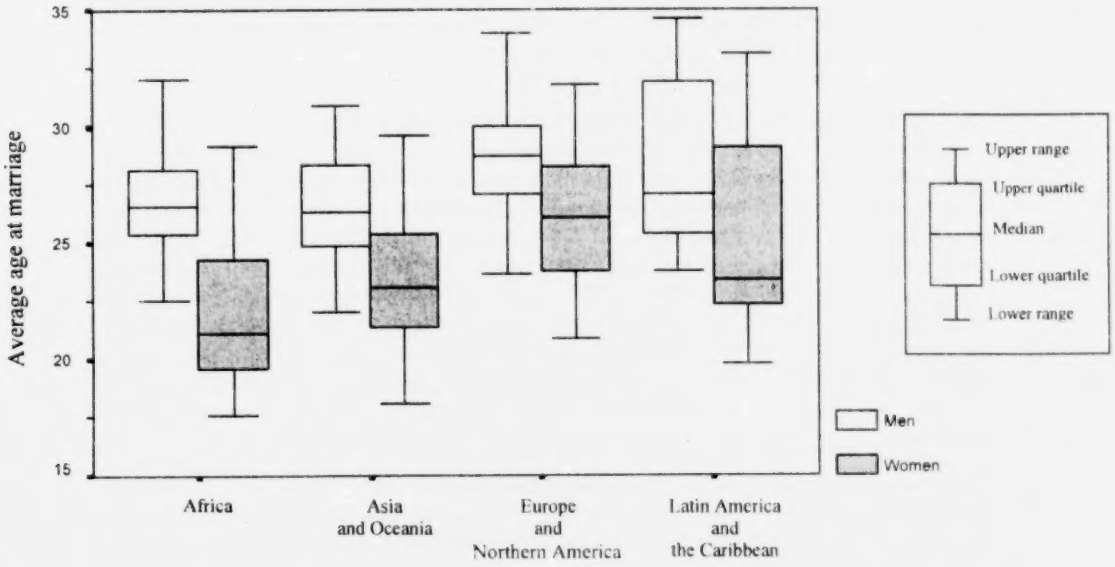
24. In all societies, marriage marks an important transition in a person's life. Although in many settings entry into marriage no longer coincides with the onset of sexual activity, marital unions remain the predominant context within which childbearing and child-rearing takes place. The timing of marriage has been receiving increasing attention from researchers and policy makers because of its long-lasting implications for a person's life options, reproductive health and family well-being (United Nations, 1990; Singh and Samara, 1996).

25. International human rights conventions provide that marriage shall be entered into only with the free and full consent of each spouse, but many women enter marriage without exercising their right to choose or are simply too young to make an informed decision (United Nations Children's Fund, 2001). Early marriage deprives a girl of her adolescence, reduces her educational opportunities, often entails premature childbearing and limits her level of autonomy within the family, including her decision-making power in matters regarding sexual and reproductive health (Kishor and Neitzel, 1996). Although most countries have enacted laws that regulate marriage, in terms of both minimum age and consent, these laws are not always enforced and often apply only to unions lacking parental consent. According to recent Demographic and Health Surveys, the proportion of young women married before age 15 exceeds one fourth in Bangladesh, Chad, Guinea and the Niger.

26. Regional averages of women's age at marriage are 21.9 in Africa, 23.4 in Asia and Oceania, 25.5 in Latin America and 26.1 in Europe and Northern America (figure I). Men's mean age at marriage is considerably higher than women's in all regions, ranging from 26.6 in Asia to 28.8 in Europe and Northern America. Regional averages of the proportion of ever-married women and men in the age group 15-19 corroborate these patterns. The highest proportion of ever-married women aged 15-19 is observed in Africa (25 per cent) followed by Asia and Oceania (13 per cent) and Latin America and the Caribbean (11 per cent), and the lowest proportion is observed in Europe and Northern America (4 per cent). By contrast, in all regions, the proportion of men aged 15-19 who have entered marriage is below 4 per cent.

27. There are significant variations in marital timing within regions, particularly among women (United Nations, 2002). In Africa, women's mean age at marriage ranges from 17.6 in the Niger to over 26 in Botswana, the Libyan Arab Jamahiriya, Namibia, South Africa and Tunisia. The Asian region also displays a wide diversity in women's mean age at marriage, which ranges from approximately 18 in Afghanistan and Bangladesh to over 26 in Japan, Myanmar, the Republic of Korea and Singapore. In the Latin American and Caribbean region, marriage generally takes place at a later age than in other less developed regions. Only in Cuba, Honduras and Nicaragua is women's mean age at marriage under 21. In Europe and Northern America, the predominant pattern is one of late marriage, although Eastern European countries usually have an earlier marriage pattern than the rest of the European countries. The female mean age at marriage is 30 or over in Finland, France, Iceland, Ireland, Norway and Sweden.

Figure I. Distribution of countries by region according to average age at marriage for men and women, based on most recent data



Source: Population Division of the United Nations Secretariat.

28. Gender differentials in age at marriage are largest in Africa, where they average 5 years, compared with 3.2 years in Asia and 2.8 years in Europe and Northern America and in Latin America and the Caribbean. In several African countries, such as Burkina Faso, Congo, Côte d'Ivoire, the Gambia, Guinea, Mali and Mauritania, and in some Asian countries, such as Afghanistan, the average gap between male and female mean age at marriage is above seven years. Large age differentials between spouses contribute to unequal power relations, reinforce women's dependency and often constrain women's decision-making on issues concerning their sexual and reproductive health (Mensch, Bruce and Greene, 1998).

29. With respect to the recent evolution of nuptiality patterns, a general trend towards marriage postponement has been documented for most world regions (Singh and Samara, 1996). The growing emphasis on education is generally acknowledged to have played a significant role in this trend (Jejeebhoy, 1995; United Nations, 1995b; Lloyd and Mensch, 1999). Worldwide, the mean age at first marriage has increased 1.6 years among women and 1.2 years among men over the past decade. The shift towards later marriage was most pronounced in Europe and Northern America, where the mean age at marriage increased by approximately 2.5 years for both men and women. A recent study also documents a significant rise in age at marriage since the early 1990s in European countries with economies in transition, which have been traditionally characterized by a relatively early marriage pattern

(United Nations Children's Fund, 1999). In Africa, the mean age at marriage increased, on average 1.6 years among females and 0.8 years among males. The shift towards later marriage has been substantial in several countries, particularly in Northern Africa. Women's mean age at marriage increased by more than two years in Benin, Cape Verde, Côte d'Ivoire, the Sudan and Tunisia and by more than three years in Algeria, Ethiopia and Morocco. In the Asian region, the overall increase in age at marriage has been 1.2 years among women and 0.9 years among men, and in some countries, such as Indonesia, Japan, Myanmar and the Philippines, the female mean age at marriage rose nearly 2 years. In the Latin American and Caribbean region, the mean age at marriage increased, on average, 1.2 years for both women and men, although in some countries, such as Chile, Colombia, the Dominican Republic, El Salvador, Haiti, Honduras and Paraguay, the female mean age at marriage has actually experienced a slight reduction.

30. Marriage customs vary considerably across societies and the type of marital arrangement may have a significant influence on the legal rights, obligations and societal protection granted to spouses and children. In some parts of the world, consensual unions are socially recognized as an acceptable context for bearing and rearing children. The rise in cohabitation has become one of the most salient features of the second demographic transition in more developed countries (Klijzing and Macura, 1997; Kiernan, 1999; Bumpass and Lu, 2000). Although in many societies cohabitation constitutes a childless stage that serves as a trial period prior to marriage, in others, such as the Scandinavian countries and France, consensual unions and marital unions are becoming increasingly alike in terms of reproductive behaviour (Brown and Dittgen, 2000). At least one fifth of young women aged 20-24 in Denmark, Finland, France and Sweden live in a consensual union.

31. Consensual unions are not a phenomenon exclusive to the developed world. The coexistence of formal marriages and consensual unions has long been a distinctive feature of nuptiality patterns in Latin America and the Caribbean (De Vos, 2000). The proportion of consensual unions among women aged 15-19 and 20-24 actually surpasses that of legal marriages in Colombia, the Dominican Republic, El Salvador, Haiti, Honduras, Jamaica, Nicaragua, Panama and Peru. Several studies have shown that consensual unions in this region are very similar to marital unions with regard to childbearing patterns, although they offer less legal protection and financial support to women and children in case of dissolution (Quilodrán, 1999). Consensual unions are also relatively common in many sub-Saharan African countries (Thiriat, 1999). The proportion of consensual unions among women aged 15-24 surpasses that of legal marriages in Botswana, Cape Verde, the Central African Republic, Liberia, Mozambique, Rwanda and Sao Tome and Principe.

II. Reproductive behaviour

Fertility levels and trends

32. During the past decade, fertility rates continued to decline in most countries. Globally, fertility declined from 3.4 children per woman in 1985-1990 to 2.8 children in 1995-2000 (table 2). In the more developed regions, fertility declined from 1.8 children per woman in 1985-1990 to levels far below replacement, averaging 1.6 children per woman in 1995-2000. The average total fertility rate for less developed regions declined from 3.8 children per woman in 1985-1990 to 3.1 in 1995-2000. These averages conceal large differences across and within regions.

33. Fertility decline was particularly fast in Northern Africa where the total fertility rate fell by 1.2 children per woman in the 10-year interval from 1985-1990 to 1995-2000. In other less developed regions, the decline in the same interval ranged from 0.2 children per woman in Middle Africa to 0.9 children per woman in South-eastern Asia and Central America. Among the developed areas, fertility declined from already low levels in Europe to 1.4 children per woman, while in Northern America fertility increased from 1.9 children per woman in 1985-1990 to 2.0 children per woman in 1995-2000. Worldwide, there appears to be no relationship between current levels of fertility and past trends in fertility during the previous decade: at every level of fertility, there are countries experiencing rapid decline and those where fertility has stalled.

34. The distribution of countries according to the level of fertility has changed tremendously from the 1970s. By the late 1990s, 50 countries, the majority of which are in sub-Saharan Africa, had levels of fertility that were above 5 children per woman. Of those, 15 countries, with a combined population of 150 million, all in sub-Saharan Africa and all but 1 belonging to the group of least developed countries, have not shown signs of any decline in fertility. In the remaining 35 countries, however, there are indications that fertility has started to decline.

35. By the late 1990s, total fertility was between 3 and 5 children per woman and declining in 46 developing countries, including 15 in Africa, 10 in Latin America and the Caribbean and 5 in Oceania. Recent fertility declines in these countries appear to have been slower, on average (at 0.1 child per woman per year), than they were among the countries that had been progressing through a similar stage of fertility decline during the 1960s, 1970s and 1980s.

36. The pace of decline has slowed in two populous countries in Asia: India and Bangladesh. In India, fertility stalled at about 5.5-5.7 children per woman between the 1960s and the early 1970s and subsequently declined to about 4 children per woman by the end of the 1980s. During the 1990s, however, fertility decline slowed to 0.01 children per woman per year, reaching the level of 3.3 children per woman at the end of the 1990s. In Bangladesh, total fertility dropped from 6.3 children per woman in 1971-1975 to 3.4 children per woman in 1991-1993 (an average decline of 0.8 children per woman every five years) but has held fairly steady at about 3.3 births per woman since then. The pace of fertility decline was also slow in a number of Latin American and Caribbean countries with relatively high total fertility rates (above 3.5 children per woman), in particular El Salvador, Haiti, Paraguay and Peru. On the other hand, several developing countries, such as Algeria, Jordan and the Libyan Arab Jamahiriya, experienced rapid fertility declines in the 1990s.

Table 2
Total fertility rate, major areas and regions, from 1970-1975 to 1995-2000

Major area, region or group	*1970-1975*	*1985-1990*	*1990-1995*	*1995-2000*
World	4.5	3.4	3.0	2.8
More developed regions[a]	2.1	1.8	1.7	1.6
Less developed regions[b]	5.4	3.8	3.4	3.1
Least developed countries	6.6	6.0	5.7	5.5
Africa	6.7	6.0	5.6	5.3
Eastern Africa	7.0	6.7	6.3	6.1
Middle Africa	6.3	6.6	6.5	6.4
Northern Africa	6.3	4.8	4.1	3.6
Southern Africa	5.5	4.1	3.5	3.3
Western Africa	7.0	6.7	6.4	5.9
Sub-Saharan Africa	6.8	6.4	6.1	5.8
Asia	5.1	3.4	2.9	2.7
Eastern Asia	4.5	2.4	1.9	1.8
South-central Asia	5.6	4.4	4.0	3.6
South-eastern Asia	5.5	3.7	3.2	2.8
Western Asia	5.6	4.7	4.2	3.9
Europe	2.2	1.8	1.6	1.4
Eastern Europe	2.2	2.1	1.6	1.3
Northern Europe	2.1	1.8	1.8	1.7
Southern Europe	2.5	1.6	1.4	1.3
Western Europe	1.9	1.6	1.6	1.5
Latin America and Caribbean	5.0	3.4	3.0	2.7
Caribbean	4.4	3.1	2.7	2.5
Central America	6.4	3.9	3.4	3.0
South America	4.7	3.2	2.8	2.6
Northern America	2.0	1.9	2.0	2.0
Oceania	3.2	2.5	2.5	2.4
Australia/New Zealand	2.6	1.9	1.9	1.8
Melanesia	5.8	4.9	4.8	4.4
Micronesia	4.8	3.8	4.1	4.3
Polynesia	5.5	4.1	3.7	3.2

Source: World Population Prospects: The 2000 Revision, vol. I, *Comprehensive Tables* (United Nations publication, Sales No. E.01.XIII.8).

[a] Comprising all regions of Europe, Northern America and Australia, New Zealand and Japan.

[b] Comprising all regions of Africa, Asia (excluding Japan) and Latin America and the Caribbean, and the regions of Melanesia, Micronesia and Polynesia.

37. During the late 1990s, the total fertility rate was below 3 births per woman but above replacement level in 26 developing countries, including Brazil, Colombia, Indonesia, the Islamic Republic of Iran, Mexico, South Africa, Turkey and Viet Nam. Over the decade, the trends in fertility were quite diverse in this group of countries. In Israel and Panama, total fertility stabilized at 2.9-3.1 children per woman. In the Islamic Republic of Iran, the total fertility rate fell sharply from 6.6 children per woman in 1984 to 2.5 children per woman in 1996, the decline having been particularly fast in the 1990s (Abbasi-Shavazi, 2001). In Viet Nam, the total fertility rate dropped from above 7 children per woman in the 1960s to about 4 children per woman in the late 1980s and 2.3 children per woman in the mid-1990s. Brazil experienced an uninterrupted fast decline: total fertility decreased from 5.7 children per woman in 1965 to 3.7 children per woman in 1989-1991 and to 2.3 children per woman in 1996 (Bozon and Enoch, 1999).

38. These trends have led to further diversification of fertility levels within and across developing regions. Africa became particularly polarized in terms of fertility levels. Since the 1980s, total fertility has declined very fast in Northern Africa; the Maghreb became a low-fertility region, while most of sub-Saharan Africa is yet to fully experience fertility declines of the magnitude experienced in other regions. Low fertility levels now characterize large parts of Asia. Populous Eastern Asia became a below-replacement region, but pockets of high fertility remain in parts of Western and South Asia. The average level and cross-country variation of total fertility in Latin America and the Caribbean are not as large as in the other major areas.

39. Approximately 44 per cent of the world's population now lives in countries with below-replacement fertility. Because China belongs to this group, the population of developing countries with below-replacement fertility (1.5 billion) is larger than that of developed countries with below-replacement fertility (1.2 billion). In many countries, fertility has fallen much lower than anticipated. In 23 European countries, Armenia, Cuba, Japan, the Republic of Korea and the two Special Administrative Regions of China (Hong Kong and Macao), the total fertility rate is currently at or below 1.5 births per woman.

Age patterns of fertility

40. During the early stages of fertility decline in the developed countries, fertility decreased more at older ages than at younger ages, resulting in the lowering of the mean age at childbearing. A similar pattern of change is typical for several developing countries where initial declines at the young ages due to increasing age at marriage are more than offset by declines in fertility among older women. This, however, is not a general rule. Changes in the age patterns of fertility are varied across major areas and regions.

41. In Africa, childbearing appears to be evenly spread between the older and younger women, but in most other major areas, nearly two thirds of instances of childbearing take place before age 30. The range in age patterns of childbearing is particularly wide among the regions of Europe. In Eastern Europe women below age 30 contribute 79 per cent of total fertility, whereas in Western Europe, the corresponding proportion is 56 per cent. The decade of the 1990s did not see much change in childbearing patterns in Africa and Latin America, while ageing of the

pattern of childbearing is evident in all regions of Europe, particularly Southern Europe, and in Eastern Asia.

42. Below-replacement age patterns of fertility are characterized by decreasing fertility of young women through the postponement of childbearing until their early and even their late thirties. Thus, the average age at childbearing is rising steadily. Massive postponement of births may cause rapidly falling period fertility rates and subsequent recuperation by cohorts would bring temporary increases in period fertility. The presumed degree of recuperation at older ages (past age 30) of fertility forgone at younger ages is therefore a crucial element in determining future trends in period total fertility (Bongaarts and Feeney, 1998; Lesthaeghe and Willems, 1999).

43. Closely spaced births and births to mothers who are younger than 18 years of age or older than 34 years of age pose health and mortality risks for both the mother and the child. Reproductive morbidity and mortality are more common among women who become pregnant at the very beginning and at the end of their reproductive span. Data for the late 1990s for 38 developing countries show that more than 10 per cent of births are to mothers below age 18 in a number of countries in Africa, Bangladesh, India, the Dominican Republic and Nicaragua. The data also show that in all developing countries, a considerable proportion of births are less than two years apart. The incidence of short birth intervals is particularly high in Asia: the share of birth intervals of less than 24 months ranges from 10 per cent in Indonesia to 35 per cent in Jordan. Close spacing of births is also widespread in Latin America and the Caribbean, where in most countries surveyed about 20-25 per cent of births occur less than two years apart. Reproductive behaviour in many sub-Saharan African countries, especially prolonged breastfeeding, limits the incidence of short birth intervals: in 13 out of 19 countries surveyed, the proportion of births intervals of less than 24 months was less than 20 per cent.

Factors affecting fertility decline

44. Industrialization, urbanization and modernization of societies, including the spread of education, improved child survival and increased adoption of contraception, are the major driving forces of fertility decline. Different combinations of particular components of these social transformations affect the pace of fertility decline, and thereby the current levels of fertility. The most rapid declines in fertility occurred in countries that had relatively high levels of development at the onset of fertility decline.

45. The decisive role of education in fostering fertility decline has been documented extensively. Education, especially of women, provides knowledge, increases exposure to information and media, builds the skills for gainful employment, increases female participation in family decision-making, and raises the opportunity costs of women's time. The empowerment and autonomy of women transform reproductive behaviour, mainly through women's ability to control their own fertility. Education is also a major underlying factor influencing age at first marriage and contraceptive use — two important proximate determinants of fertility. Even a few years of formal education make a difference: in most countries, women with primary education have fewer children than uneducated women (United Nations, 1995).

46. Table 3 presents fertility levels for women in various educational categories for 51 developing countries. The average total fertility rate for these countries was, in the late 1990s, 2.7 children less for women with secondary or higher education than for women with no education, and this differential is not related to the overall level of fertility. Moreover, national fertility differentials by education are not uniform within and across regions. In Africa and Asia, the difference between total fertility of women with no schooling and women with at least secondary education varied from 0.1 children per woman in Indonesia and Jordan to 4 children or more per woman in Bahrain, Burkina Faso, Cape Verde, Oman and the United Arab Emirates.

47. In nearly half the countries shown in table 3, the total fertility rate among women with secondary or higher education was below 3 children per woman. In Latin America in particular, in all 10 countries the total fertility rate among the more educated was 3 children or less per woman and in Brazil it was just 1.5 births per woman. Comparisons with earlier data show that fertility has fallen among all education groups, including among women with no education. For example in Ghana, fertility among women with no education declined from 7.1 births per woman in 1988 to 5.8 in 1998; among women with secondary education or more, fertility fell from between 6.8 and 4.9 in 1988 to just 2.8 births per woman in 1998 (United Nations, 1998). Reductions in fertility through educational attainment are reinforced by reductions caused by other factors such as increases in age at marriage and contraceptive use.

48. Fertility decline in countries of Europe and Northern America has been associated with decreasing marital fertility, rising age at marriage, increasing divorce rates and prevalence of cohabitation, while in Eastern Asia the components of fertility decline were limited to decreasing marital fertility and rising age at marriage. The factors underlying different patterns of below-replacement reproductive behaviour are complex. Shifts in value orientation resulting from greater individual autonomy in all domains are consistent with a lifestyle in which people make their own choices about marriage and cohabitation, and are free to have children within or outside marriage, to raise them alone or with a partner, and to have them early or late in life or not at all (McDonald, 1994; Lesthaeghe and Willems, 1999; Van de Kaa, 1999). Particular components of these societal changes are likely to have different impacts on reproductive behaviour. Since relatively modest variations in reproductive behaviour in societies with below-replacement fertility change the sign of population growth and make a difference between slow or rapid population ageing, it is particularly important to further the understanding of trends and patterns of below-replacement fertility.

Table 3
Total fertility rates according to women's level of education, selected developing countries

Country	*Survey year*	*Total*	*Level of education*			*Difference (no education — secondary or higher)*
			No education	*Primary*	*Secondary or higher*	
Africa						
Benin	1996	6.3	7.0	5.0	3.2	3.8
Burkina Faso	1999	6.8	7.1	5.4	2.9	4.2
Cameroon	1998	5.2	6.6	5.3	3.6	3.0
Cape Verde	1998	4.0	6.9	3.5	2.2	4.7
Comoros	1996	5.1	5.8	5.3	3.6	2.2
Egypt	2000	3.5	4.1	3.4	3.2	0.9
Eritrea	1995	6.1	6.9	5.5	3.0	3.9
Ethiopia	2000	5.9	6.2	5.1	3.1	3.1
Ghana	1998	4.6	5.8	4.9	2.8	3.0
Guinea	1999	5.5	5.9	4.8	3.5	2.4
Kenya	1998	4.7	5.8	4.8	3.5	2.3
Libyan Arab Jamahiriya	1995	4.1	5.2	3.9	3.3	1.9
Madagascar	1997	6.0	6.8	6.5	4.2	2.6
Mali	1996	6.7	7.1	6.5	4.1	3.0
Morocco	1995	3.3	4.0	2.4	1.9	2.1
Mozambique	1997	5.6	5.8	5.7	3.7	2.1
Niger	1998	7.5	7.8	6.7	4.6	3.2
Nigeria	1999	5.2	6.1	5.6	4.9	1.2
Senegal	1997	5.7	6.3	5.2	3.1	3.2
Sudan	1993	4.6	5.4	5.2	3.6	1.8
Togo	1998	5.4	6.5	4.8	2.7	3.8
Tunisia	1995	3.2	4.2	2.7	1.6	2.6
Uganda	1995	6.9	7.0	7.1	5.2	1.8
United Republic of Tanzania	1996	5.6	6.5	5.1	4.9	1.6
Zambia	1996	6.1	6.8	6.7	4.5	2.3
Zimbabwe	1999	4.0	5.2	4.5	3.4	1.8
Asia						
Bahrain	1995	3.2	7.0	3.7	3.0	4.0
Bangladesh	1997	3.4	3.8	3.3	2.6	1.2
India	1999	2.9	3.5	2.6	2.0	1.5
Indonesia	1997	2.8	2.7	3.0	2.6	0.1
Jordan	1997	4.4	4.6	4.5	4.5	0.1
Kuwait	1996	4.1	5.7	5.1	3.4	2.3
Lebanon	1996	2.4	3.6	2.7	1.7	1.9
Oman	1995	7.1	8.6	7.5	3.8	4.8

Country	Survey year	Total	Level of education			Difference (no education secondary or higher)
			No education	Primary	Secondary or higher	
Philippines	1998	3.7	5.0	5.0	3.3	1.7
Qatar	1998	3.9	6.5	4.0	3.7	2.8
Saudi Arabia	1996	5.7	7.4	5.6	4.6	2.8
Syrian Arab Republic	1993	4.2	5.3	3.8	2.8	2.5
Turkey	1998	2.6	3.9	2.6	1.6	2.3
United Arab Emirates	1995	4.9	7.3	5.3	3.3	4.0
Yemen	1997	6.5	6.9	4.7	3.1	3.8
Latin America and the Caribbean						
Bolivia	1998	4.2	7.1	5.8	2.7	4.4
Brazil	1996	2.5	5.0	3.0	1.5	3.5
Colombia	2000	2.6	4.0	3.6	2.4	1.6
Dominican Republic	1996	3.2	5.0	4.3	2.6	2.4
Ecuador	1999	3.4	5.6	4.2	2.9	2.7
El Salvador	1998	3.6	5.0	3.6	2.4	2.6
Guatemala	1999	5.0	6.8	5.2	2.9	3.9
Nicaragua	1998	3.9	6.1	4.1	2.7	3.4
Paraguay	1996	4.4	6.9	4.7	2.4	4.5
Peru	1996	3.5	6.9	5.0	3.0	3.9

Source: Demographic and Health Surveys (Calverton, Maryland, Macro International, Inc.).

Adolescent childbearing

49. Early childbearing, especially childbearing below age 18, entails a risk of maternal death that is much greater than average, and the children of young mothers have higher levels of morbidity and mortality. Early childbearing may also truncate a young woman's educational career, and threaten her economic prospects, earning capacity and overall well-being. Young mothers may pass on to their children a legacy of poor health, deficient education and subsistence living, creating a hard-to-break cycle of poverty.

50. It is estimated that about 14 million women aged 15-19 worldwide gave birth each year in 1995-2000; 12.8 million births occurred to adolescents in the developing regions. In 1995-2000, the adolescent fertility rate was 54 births per 1,000 women for the world as a whole. In the more developed regions, the rate was 29 per 1,000 women, while in the less developed regions, the adolescent fertility rate was nearly double, at 58 births per 1,000 women. On average, adolescent childbearing is most common in sub-Saharan Africa (132 births per 1,000 women) and least common in Europe (25 births per 1,000 women). As shown in figure II, current levels of adolescent fertility vary widely in all major areas.

51. African countries have the highest levels of adolescent fertility and also the largest variation in rates compared with other areas. Moreover, of the 20 countries

with data for two points in time in the 1990s, adolescent fertility rates increased in 6 countries: Chad, Guinea, Kenya, Madagascar, the Niger and Zimbabwe. In the remaining 14 countries, adolescent fertility rates decreased in the 1990s with declines of over 20 births per 1,000 women in 6 countries. Despite the large declines in Cameroon, Côte d'Ivoire, Nigeria and Senegal, age-specific fertility rates among women 15-19 years in the late 1990s were above 100 births per 1,000 women.

52. In many countries of Asia, increases in age at marriage and low incidence of premarital childbearing have resulted in low levels of childbearing among adolescents. In 28 Asian countries, the rates were less than 50 per 1,000 women, but in 10 countries they exceeded 100 per 1,000 women. Of the 25 Asian countries with data for two points in time in the 1990s, five recorded declines of above 20 births per 1,000 women.

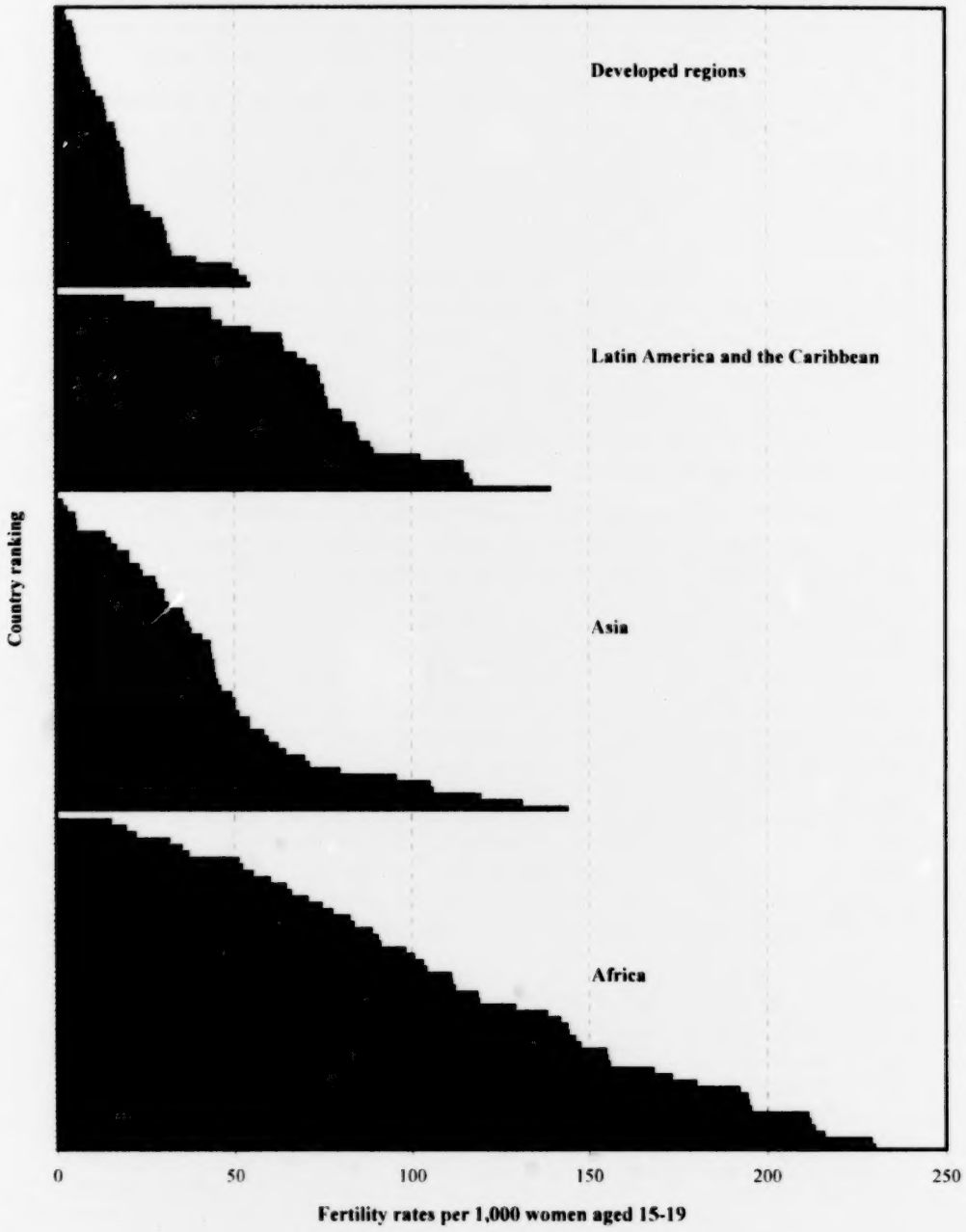
53. In most of Latin America and the Caribbean, adolescent fertility is in the range of 50-100 births per 1,000 women; five countries achieved levels below 50, while in six countries fertility rates for ages 15-19 exceeded 100 births per 1,000 women. Adolescent fertility rates in Latin America and the Caribbean continue to be relatively high even though in most countries total fertility rates had reached low levels by the end of the 1990s (Guzmán and others, 2001). For instance, in Brazil between 1990 and 1995, total fertility declined from 3.7 to 2.6 births per 1,000 women, while teenage fertility increased from 76 to 88 births per 1,000 women.

54. Adolescent fertility is currently below 50 per 1,000 women in all but two developed countries, Ukraine and the Republic of Moldova. In Bulgaria and the United States of America, adolescent fertility decreased respectively from 70 and 61 per 1,000 women in 1990 to 49 per 1,000 in 2000. Fertility rates are below 20 per 1,000 women in the majority of developed countries and are as low as 5 or less in Japan, Slovenia and a few Western European countries. Many of the countries of Eastern Europe and the Baltic States experienced rapid declines in adolescent childbearing during the 1990s. For instance, in the Russian Federation age-specific fertility rates per woman aged 15-19 dropped from 56 per 1,000 in 1990 to 30 per 1,000 in 1999. Part of the decline has been associated with increasing enrolment in institutions of learning and, more generally, rising social aspirations of young adults, observed in a series of surveys carried out in Moscow and the provinces (Magun, 1998).

Infertility

55. Between 8 and 12 per cent of all couples worldwide experience a form of infertility during their reproductive life (World Health Organization, 1991). Infertility is defined as failure either to conceive through normal sexual activity without contraception or to carry a pregnancy to full term. Infertility affects both men and women of reproductive age. In contrast to intentional childlessness, which may be determined by social, cultural, economic or psychological factors, the causes of infertility are biological, and infertility is an impediment to the realization of the full reproductive health of men and women.

Figure II. Age-specific fertility of women aged 15-19, late 1990s



Source: Population Division of the United Nations Secretariat.

56. Infertility is termed "primary" when a woman has never been able to bear live children, and "secondary" when a woman becomes infertile after the birth of one or two children. Infertility may be caused by innate conditions or acquired through behaviours such as early sexual activity and multiple partners with attendant exposure to STIs. A 3-10 per cent level of primary infertility is due to genetic, anatomical, endocrinological or immunologic factors. The prevalence of secondary infertility among women aged 40 years or over, most often caused by sexually transmitted diseases, ranges from 4 per cent in some South American and the Middle Eastern countries to 29 per cent in several sub-Saharan countries (AbouZahr, Ahman and Guidotti, 1998).

57. In the low-fertility countries, infertility often results from intentional postponement of childbearing. The likelihood of becoming pregnant decreases with age. Therefore, if young women postpone births and subsequently try to make up for these postponed births over the next decade or two, they will be confronted with increasing likelihood of failure to conceive.

58. Infertility prevalence appears to be evolving in opposite directions in developing and developed countries. In the former, improvements in the prevention and treatment of STIs and increasing availability and accessibility of antibiotics help to reduce infertility (manifested, notably, in temporary increases of period fertility rates prior to the onset of fertility decline), whereas in the latter, increasing postponement of childbearing coupled with a high propensity for seeking infertility treatment leads to a rising reported infertility prevalence.

III. Family planning

59. Family planning has long been a central component of population policies and programmes and is an integral part of reproductive health. It allows couples and individuals to realize the basic right of deciding freely and responsibly the number, spacing and timing of their children, a right well-established at the United Nations World Population Conference in 1974 and reaffirmed at the International Conference on Population and Development held in Cairo in 1994 (United Nations, 1975, 1995). The fact that family planning allows couples and individuals to control their own reproductive process is central to the quality of their lives. Indeed, it has been widely shown that both women's health and children's health are at a high risk if women have pregnancies too soon, too late, too many times or too close to each other.

60. The use of family planning has been steadily increasing. More than 60 per cent of couples residing in the less developed world use family planning today, compared with only 10 per cent in the 1960s. The growing availability of modern contraceptive methods and of organized family planning programmes (whether governmental or non-governmental), along with a growing desire for smaller families, has been responsible for the rise in family planning use and the related decline in fertility in the less developed countries. In the more developed countries, where contraceptive use has long reached a relatively high level, the introduction of modern methods has also had an impact by allowing couples and individuals to diversify their choice of specific contraceptive methods.

Levels of contraceptive use

61. It is estimated that contraceptive prevalence — the proportion currently using contraception among couples with the woman of reproductive age — was 62 per cent at the world level in 1997 (see table 4). In the more developed regions, contraceptive prevalence averaged 70 per cent with very little variation across areas. In the less developed world, it averaged 60 per cent but with wide disparities among its major areas: prevalence ranged from only 25 per cent in Africa to over 65 per cent in Asia and Latin America and the Caribbean. Given the pace at which contraceptive use has been increasing in the less developed areas, it is likely that by 2000, 65 per cent of couples were practising contraception in the world.

62. Modern methods, which are considered to be more effective in preventing pregnancy, account for most of contraceptive practice worldwide. The use of modern methods usually requires access to family planning services or supplies. Modern methods include female and male sterilization, oral pills, intrauterine devices (IUDs), condoms, injectables or implants and vaginal barrier methods (including diaphragm, cervical cap and spermicidal foams, jelly, cream and sponges). Modern methods account for a larger share of contraceptive use in the less developed regions (91 per cent of users) than in the more developed regions (84 per cent). This is due largely to the heavy reliance on traditional methods — primarily withdrawal, various forms of periodic abstinence and contraceptive douching — in some parts of Europe and in the former Union of Soviet Socialist Republics (USSR) (Popov, Visser and Ketting, 1993).

63. Africa has the lowest contraceptive prevalence in the world, with on average a quarter of couples using family planning. The majority of the countries in Africa have a prevalence lower than 20 per cent. Moreover, modern contraceptive levels are lower than 10 per cent in over half of the countries. However, regional disparities are pronounced. With the exception of the islands of Mauritius and Réunion, where over two thirds of couples use contraception, average prevalence in Northern and Southern Africa, 48 and 52 per cent respectively, is three to five times higher than that in Eastern, Middle and Western Africa.

64. In the developing countries of Asia, 66 per cent of couples are using family planning. However, this average figure is heavily influenced by the high level of use in China. Average contraceptive prevalence in Eastern Asia, the region containing China, is in fact the highest among all regions of the world (83 per cent), surpassing even the maximum level recorded in the more developed regions (78 per cent in Northern Europe). Contraceptive use levels in the other Asian regions are more comparable with those of Northern and Southern Africa. Nine per cent of Asian countries report a prevalence of less than 20 per cent and about one third report a prevalence exceeding 60 per cent.

65. In Latin America and the Caribbean, the average prevalence is fairly high (69 per cent) and, as in the more developed areas, variation at the regional level is quite modest. Prevalence ranges from 59 per cent of couples using family planning in the Caribbean to 73 per cent in South America. In this major area, two thirds of the countries report a prevalence that exceeds 50 per cent, which is an indication that contraceptive use is already very popular.

Table 4

Average prevalence of specific contraceptive methods, by major area and region

(Based on the most recent available survey data, average date 1997)

Major area and region	All methods (1)	Modern methods[a] (2)	Sterilization		Pill (5)	Injectables (6)	IUD (7)	Condom (8)	Vaginal barrier methods (9)	Other modern methods (10)	Rhythm (11)	Withdrawal (12)	Other traditional methods (13)
			Female (3)	Male (4)									
	Percentage of couples with the woman of reproductive age using contraception												
World	61.9	55.6	20.1	4.1	7.8	2.6	14.9	5.1	0.4	0.6	2.6	3.1	0.6
Less developed regions	60.2	54.9	22.0	3.6	5.9	3.1	16.3	3.1	0.2	0.6	2.5	2.3	0.6
Africa	25.2	19.8	2.2	0.1	7.1	4.2	4.9	1.1	0.1	0.1	3.2	1.1	1.0
Eastern Africa	20.6	15.2	2.0	0.0	5.6	5.4	0.7	1.2	0.0	0.2	2.7	1.4	1.3
Middle Africa	10.0	3.2	0.5	0.1	0.9	0.5	0.2	0.9	0.2	0.0	4.9	0.8	1.1
Northern Africa	47.7	44.1	2.7	0.0	18.0	3.0	19.2	0.9	0.2	0.1	2.4	0.9	0.2
Southern Africa	51.9	50.4	14.0	1.8	10.3	20.7	2.0	1.6	0.0	0.0	0.4	0.8	0.4
Western Africa	14.4	7.8	0.4	0.0	2.5	1.9	1.4	1.2	0.2	0.2	4.2	1.0	1.4
Asia[b]	65.8	60.8	24.8	4.4	4.8	2.9	19.6	3.4	0.2	0.8	2.0	2.5	0.5
Eastern Asia[b]	83.4	82.4	32.8	7.7	1.7	0.0	35.8	3.8	0.2	0.4	0.9	0.0	0.1
South-central Asia	48.0	40.9	23.3	1.6	5.3	3.5	3.7	3.2	0.0	0.4	3.4	2.7	1.0
South-eastern Asia	57.9	49.6	7.7	0.8	13.0	13.0	10.4	2.0	0.0	2.7	3.3	3.8	1.2
Western Asia	47.8	29.3	3.0	0.0	6.1	0.6	13.7	5.0	0.5	0.3	2.1	14.3	2.0
Latin America and the Caribbean	68.8	59.9	29.5	1.6	13.8	3.0	7.4	4.2	0.3	0.1	4.9	3.4	0.6
Caribbean	58.7	55.8	22.6	0.5	10.5	5.6	11.2	4.3	0.4	0.6	1.3	1.4	0.2
Central America	62.9	54.5	23.6	0.7	9.1	4.0	13.0	3.9	0.1	0.0	5.3	3.0	0.1
South America	72.8	62.9	31.9	1.9	16.9	2.4	4.8	4.6	0.3	0.1	5.4	2.3	0.7
Oceania[c]	27.7	21.5	8.6	0.2	4.9	6.1	0.6	1.1	0.0	0.0	2.8	0.9	2.6
More developed regions[d]	70.4	59.2	10.4	7.2	17.3	0.1	7.6	15.0	1.1	0.5	3.6	6.8	0.8
Asia: Japan	58.6	52.8	3.4	0.7	0.4	0.0	2.2	45.5	0.6	0.0	3.3	1.7	0.8
Europe	70.1	55.3	4.8	4.9	22.0	0.2	11.9	10.5	1.1	0.0	4.3	10.0	0.6
Eastern Europe	63.2	35.1	1.5	0.0	6.8	0.0	14.2	11.1	1.3	0.2	10.1	17.9	0.1
Northern Europe	78.4	75.8	12.2	13.4	19.7	0.2	11.1	17.0	2.2	0.0	0.9	1.6	0.1
Southern Europe	66.9	45.2	6.3	2.4	11.4	0.3	11.4	12.8	0.6	0.0	3.1	17.8	0.8
Western Europe	74.5	70.6	3.3	7.1	43.7	0.3	10.0	5.3	0.9	0.0	1.3	1.7	1.0
Northern America	76.2	70.8	24.5	13.4	15.5	0.0	0.9	12.9	1.7	1.9	2.1	2.1	1.2
Oceania:													
Australia-New Zealand	75.9	72.2	33.3	15.3	6.4	2.6	6.0	7.6	1.0	0.0	2.0	1.5	0.2

Source: Database on Contraceptive Use maintained by the Population Division of the United Nations Secretariat.

Note: These estimates reflect assumptions about contraceptive use in countries with no data. Data pertain to women who are formally married or in a consensual union.

[a] Including methods in columns (3) through (10).

[b] Excluding Japan.

[c] Excluding Australia-New Zealand.

[d] Australia-New Zealand, Europe, Japan and Northern America.

66. In the more developed regions, variation at the regional level falls within a relatively narrow range, from 59 per cent in Japan to 78 per cent in Northern Europe, but regional disparities in the use of modern methods are more pronounced. Prevalence of modern methods is as low as 35 per cent in Eastern Europe and as high as 71-76 per cent in Northern and Western Europe.

Recent trends in contraceptive use

67. Most developing countries with available recent trend data show a substantial increase in contraceptive use over the past 10 years. Prevalence increased by at least 1 percentage point per annum in 68 per cent of the countries, and by at least 2 percentage points per annum in 15 per cent of the countries. The most rapid increases occurred mainly in countries with prevalence levels in the medium range (between 35 and 64 per cent) in 1990. Countries with the lowest increase in prevalence (less than 1 percentage point per annum) belong in majority to sub-Saharan Africa, particularly Western Africa, where prevalence in 1990 was very low, and to Eastern Asia, where prevalence in 1990 was very high. Because modern methods account for most of the growth in contraceptive use in developing countries, the pace of growth for all methods and that for modern methods are very similar.

68. Contrary to the developing countries (excluding Eastern Asian countries), developed countries have shown little growth or diversity in levels of contraceptive use during the past 10 years. However, modern methods increased at a somewhat higher pace.

69. In general, rising use of female sterilization continues to be the most important trend in both the less and the more developed regions. However, there are many countries where other methods are playing a prominent role. While there is a general tendency for modern methods, as a group, to become more predominant over time, there is little evidence that widely varying national patterns of use are converging towards a similar method mix.

Contraceptive methods used

70. Most users of contraception rely on modern methods. Modern methods account for 90 per cent of contraceptive use worldwide. In particular, three female-oriented methods are most commonly used: female sterilization, IUDs and oral pills. These three methods account for 69 per cent of use worldwide and 74 per cent in the less developed regions. On average, the prevalence of modern methods is almost the same in the more developed and less developed regions: 59 per cent and 55 per cent, respectively. However, as noted above, modern methods account for a larger share of contraceptive use in the less developed regions than in the more developed regions.

71. With respect to the use of specific methods, marked differences exist between the more and less developed regions. One striking contrast between the two areas involves the use of traditional methods. This group of methods includes periodic abstinence or rhythm, withdrawal (coitus interruptus), abstinence, douching and various folk methods. Prevalence of traditional methods in the more developed regions is twice as high as in the less developed regions (11 per cent and 5 per cent,

respectively). The higher popularity of traditional methods in the developed world reflects the continuing influence of patterns of fertility control established before modern contraceptive methods were invented and also the limited availability of newer methods in some European countries. Recent surveys conducted in the 1990s show that the popularity of traditional methods has decreased in Western Europe but not in Eastern and Southern Europe (except in Spain).

72. A second contrast between more and less developed regions resides in the fact that, in the more developed regions, contraceptive users rely more on short-acting and reversible methods, whereas in the less developed regions, they rely more on longer-acting and highly effective clinical methods. On average, over 6 out of 10 contraceptive users in the more developed regions use oral pills, condoms or traditional methods. By contrast, 7 out of 10 users rely on sterilization or IUDs in the less developed regions. A major factor contributing to this result is the high reliance on female sterilization and IUDs in Asia. In particular, over 30 per cent of female users are sterilized in China and India, and over 30 per cent have an IUD in China.

73. A third difference between the more and less developed regions resides in the importance of the use of male-oriented methods. Worldwide, less than a quarter of couples that are contraceptive users rely on a method that requires male participation (condom and male sterilization) or cooperation (rhythm and withdrawal). However, reliance on male-oriented methods is much greater in more developed regions (about 50 per cent of overall contraceptive use) than in less developed regions (about 20 per cent).

74. In terms of specific method prevalence, female sterilization ranks first (20 per cent of currently married women) in the world. Globally, one out of every three currently married women using a contraceptive method is sterilized. The term "currently married" used throughout the present section includes women who are in a formal as well as women in an informal union. The prevalence of female sterilization in the less developed regions is twice that of the more developed regions (22 per cent and 10 per cent, respectively). At the regional level, the method is relatively common — prevalence of over 10 per cent — in Eastern Asia, South-central Asia, Latin America and the Caribbean, Northern Europe, Northern America and Australia-New Zealand, but is rarely used in Africa, Eastern Europe, Southern Europe, Western Europe and Japan.

75. Male sterilization is much less common than female sterilization. At the world level, only 4 per cent of women reported that their partner was sterilized. Contrary to the pattern observed for female sterilization, the prevalence of male sterilization users in the more developed regions is twice that of the less developed regions (7 per cent and 3 per cent, respectively). At the regional level, the method's prevalence is over 10 per cent in Northern Europe, Northern America and Australia-New Zealand. At the country level, the method's prevalence is highest in Australia, Canada, New Zealand and the United States (10-19 per cent).

76. The IUD, used by 15 per cent of currently married women and by 1 out of every 4 contraceptive users worldwide, ranks behind female sterilization as the second most widely used contraceptive method. The prevalence of the IUD in the less developed regions is twice that of the more developed regions (16 per cent and 8 per cent, respectively). At the regional level, the method is relatively common — prevalence of over 10 per cent — in Northern Africa, Asia (except South-central

Asia), Central America, the Caribbean and Europe. At the country level, prevalence of the IUD is extremely high in the Democratic People's Republic of Korea, Kazakhstan and Uzbekistan (40-49 per cent). In general, most developing countries with trend data show a modest increase in IUD prevalence over the most recent interval. In contrast, the trend has been in the direction of a decline in IUD use in most of the developed countries.

77. Oral pills, used by 8 per cent of currently married women and by 13 per cent of contraceptive users worldwide, ranks behind female sterilization and the IUD as the third most used method. Oral pill prevalence is about three times higher in the more developed regions than in the less developed regions (17 per cent and 6 per cent, respectively). The concentration of pill use is also higher in the more developed regions, where the method is selected, on average, by 1 out of 4 contraceptive users, compared with 1 out of 10 in the less developed regions. At the regional level, the method is relatively common — prevalence of over 10 per cent — in Northern Africa, South-eastern Asia, the Caribbean, South America, Europe (except Eastern Europe) and Northern America. The pill enjoys the widest geographical distribution of use of any method. Among developing countries, well over half report an increase in pill prevalence during the recent past. The majority of developed countries have shown little change in patterns of pill use from the 1980s to the 1990s.

78. Condoms are used on average by 5 per cent of couples and by 8 per cent of contraceptive users worldwide. As in the case of the pill, condom prevalence is much higher in more developed regions than in less developed regions (15 per cent and 3 per cent, respectively). It is worth noting that Japan, where 46 per cent of couples (and three fourths of Japanese contraceptive users) rely on condoms, has by far the highest prevalence of condoms.

79. Trend data for the past 10 to 15 years show that condom use has increased in the great majority of the developing countries of Africa, Asia and Latin America and the Caribbean, probably as a result of campaigns promoting condom use to protect against HIV infection. In the developed world, condom use has increased in Northern America, New Zealand and some European countries (particularly Spain where it rose by 12 percentage points between 1985 and 1995, from 12 to 24 per cent) but decreased in other European countries.

80. The above estimates are derived from women's reports of condom use for contraceptive purposes within recognized marital unions. Such information may exclude a substantial portion of condom use. For example, surveys that interviewed both men and women show that men report higher levels of condom use than do women, both in developing and in developed countries. Also, the reported level of condom use would be higher if respondents were asked about use for either pregnancy prevention or sexually transmitted diseases prevention, rather than for contraceptive purposes only. Likewise, reported condom use would be considerably higher if the survey enquired explicitly about use with any sexual partner, as opposed to suggesting that use with the spouse or primary partner was the main concern (McFarlane, Friedman and Morris, 1994). Current use of condoms can also be understated if the respondents used condoms in conjunction with other methods (especially more effective methods) because in the great majority of the surveys, only the most effective method was registered if a combination of methods was being used. Finally, the condom reviewed here consists of the male condom because it is the only type reported in surveys up to now.

81. Injectable hormonal methods and the Norplant subdermal implant are not as widely available as most other modern methods and are currently used by only 3 per cent of currently married women worldwide. Most of the users of injectables and Norplant live in the less developed regions, where, on average, 3 per cent of married women use them, compared with less than 1 per cent in the more developed regions.

82. Vaginal barrier methods are used by less than 1 per cent of currently married women worldwide and account for less than one-half per cent of contraceptive users. Current use of vaginal barrier methods is likely to be understated, however, to the extent that they are usually used in combination with other methods (particularly condoms). Most of the users of these methods live in the more developed regions, where, on average, 1 per cent of married women use them, compared with 0.2 per cent in the less developed regions.

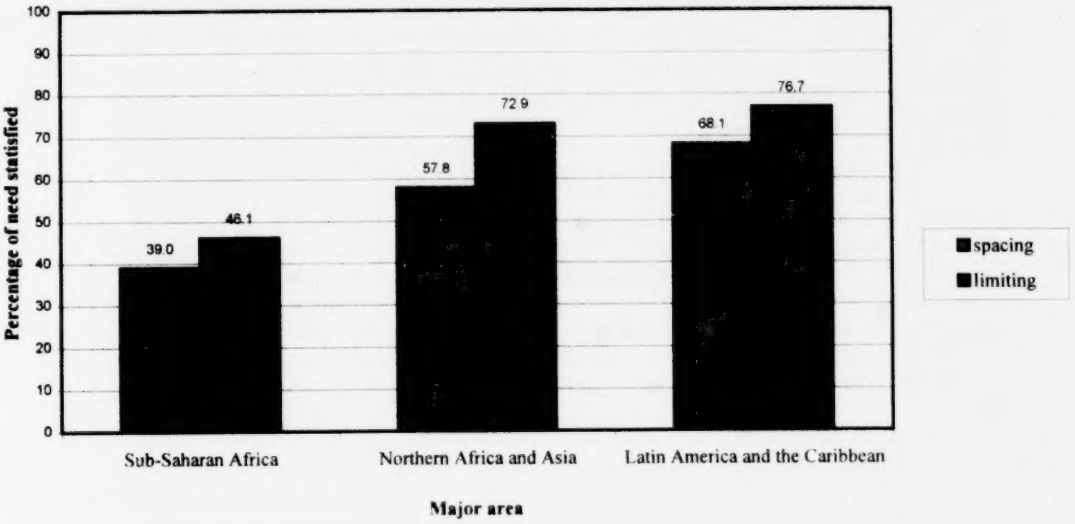
83. Traditional methods are used by 6 per cent of currently married women worldwide and by 10 per cent of all contraceptive users. As noted earlier, traditional methods are more widely used in more developed regions than in less developed regions. The most important among the traditional methods are withdrawal and rhythm (mainly the periodic abstinence method). Withdrawal is used by 3 per cent of couples worldwide. It is the main method used in Eastern and Southern Europe, where its prevalence reaches 18 per cent, and in Western Asia, where its prevalence reaches 14 per cent. Rhythm is also used by 3 per cent of couples worldwide and rhythm is in general more widely reported than withdrawal in regions other than Eastern Europe and Western Asia.

Unmet need for family planning

84. Despite the recent rapid growth in the use of contraception, a variety of indicators suggest that problems of limited choice of methods as well as high unmet need for family planning are still widespread in the developing countries. In as many as one third of the countries, a single method, usually sterilization or the pill, still accounts for at least half of all contraceptive use. At the same time, about 20 per cent of couples in developing countries (excluding China) express a desire to space or limit their families and yet are not using any contraceptive method. This need for family planning that is not met by contraceptive use is distinctly higher in sub-Saharan Africa, where, on average, 24 per cent of currently married women have unmet need for family planning, compared with about 18 per cent in Northern Africa, Asia and Latin America and the Caribbean.

85. By adding together the percentage of women using contraception and the percentage of women with unmet need for family planning, one can derive a figure labelled "total need for family planning". Figure III presents met need for family planning as a percentage of this total need that is satisfied through contraceptive use. The largest differential in the percentage of total need satisfied is once again between sub-Saharan Africa and the other regions. In sub-Saharan Africa, less than half of the women who need family planning for birth spacing or limiting purposes are using contraception, whereas in the other regions, more than 60 per cent of such need is satisfied. In all the regions, though, those who wish to terminate childbearing are substantially more likely to be using contraception than those who wish to delay the next birth. This suggests that the desire to limit family size is more strongly felt -- perhaps because the consequences of failure to achieve this goal are viewed as more costly — than the desire to space births.

Figure III. Proportion of currently married women whose family planning need for spacing or for limiting births is satisfied, by major area, late 1990s



Source: Population Division of the United Nations Secretariat.

86. The latest estimate is that 105 million married or cohabiting women of reproductive age in the developing world have an unmet need for family planning (Ross, 2001). In many countries, the lack of accessibility to family planning services of acceptable quality, as well as the lack of information about what services are available, remains a pervasive obstacle to family planning use (Robey, Ross and Bhushan, 1996). This is particularly true in sub-Saharan Africa where substantial fractions of women are simply not aware of any modern form of contraception (Westoff and Bankole, 1995). Other reasons commonly invoked for not using family planning include weakly held preferences and low perceived risk of conceiving, lack of necessary knowledge of family planning and, finally, cultural, social, health and economic concerns associated with adopting and/or continuing to use contraception, including opposition from husbands and other members of the extended family, fear of side effects of contraceptive methods, high cost and fatalism (Bongaarts and Bruce, 1995).

Current contraceptive use and need among adolescents

87. In the developing countries, most married female adolescents do not use family planning. Recent surveys show that contraceptive prevalence among married female adolescents is in general lowest in sub-Saharan Africa (less than 20 per cent), at a medium level in Asia and Northern Africa (between 20 and 40 per cent) and highest in Latin America and the Caribbean (over 30 per cent). As in the case of all

currently married women of reproductive age, modern methods account for the majority of instances — although at a lower percentage — of contraceptive use among adolescents. However, when data on contraceptive use among adolescents and among all women are compared, most of the countries show a contraceptive prevalence among married adolescents that is about half that among older married women. This is probably associated with the higher desire for more children among younger women.

88. In the developing countries, unmarried but sexually active female adolescents tend to report a much higher use of family planning than married female adolescents. Reported contraceptive prevalence among sexually active unmarried female adolescents is, in general, over 30 per cent in sub-Saharan Africa and over 60 per cent in Latin America and the Caribbean. In particular, condom use is much higher among unmarried female adolescents than among married female adolescents. This higher use of family planning among unmarried adolescents is probably due to the fact that, inasmuch as they perceive a higher cost for unwanted pregnancies than their married counterparts, they try harder to avoid them (Contreras, Guzmán and Hakkert, 2001).

89. Data available from the developed countries show that in general, contraceptive prevalence is high (over 40 per cent) among married female adolescents. It is almost as high as among older married women. In Northern America, modern methods account for all contraceptive use among adolescents but in Europe, they generally account for a lower proportion. Condoms account for a much higher portion of all female adolescent contraceptive use in the developed countries (27 per cent, on average) than in the developing countries (14 per cent in sub-Saharan Africa, 9 per cent in Asia and 10 per cent in Latin America and the Caribbean, on average). This suggests that the campaigns promoting condoms as a way of preventing both sexually transmitted diseases (including HIV infection) and unwanted pregnancies have had a higher impact among adolescents living in the developed world than among those living in the developing world.

90. High proportions (over 15 per cent) of currently married female adolescents have an unmet need for family planning in the majority of developing countries with data. Unmet need levels are usually higher among adolescents than among older women. Also, the percentage of need satisfied is lower among adolescents than among all women of reproductive age. These results confirm earlier findings (United Nations, 1998, 2000a) and point to the fact that married adolescents are less protected against unwanted pregnancies than older married women. Young women are probably less knowledgeable about methods and services. They may also face greater barriers to gaining access to family planning services. Finally, young women, whose family planning needs are usually for birth spacing rather than for birth limiting, may have restricted choice in terms of available methods that are suitable to their situation.

IV. Abortion

91. At the International Conference on Population and Development in 1994, although the question of abortion proved to be one of the most contentious, there was nonetheless a consensus among Governments on the view that unsafe abortion is "a major public-health concern" and with respect to making a commitment "to

deal with the health impact of unsafe abortion[1]" as an integral part of their commitment to women's health (United Nations, 1995a, chap. I, resolution 1, annex, chap. VIII, para. 8.25).

92. Governments' continued concern with the health impact of unsafe abortion was further reflected in the key actions for the further implementation of the Programme of Action of the International Conference on Population and Development (General Assembly resolution S-21/2, annex). The key actions called upon Governments to "take appropriate steps to help women to avoid abortion" (para. 63 (ii)) and "provide for the humane treatment and counselling of women who have had recourse to abortion" (ibid.). Also, "in circumstances where abortion is not against the law, health systems should train and equip health-service providers and should take other measures to ensure that such abortion is safe and accessible" (para. 63 (iii)).

Data on abortion

93. Approximately 26 million legal abortions and 20 million unsafe abortions were estimated to have been performed worldwide in 1995 (Henshaw, Singh and Haas, 1999a; World Health Organization, 1998). While these figures provide a sense of the magnitude of the abortion issue, they remain quite speculative since hard data are missing for the large majority of countries. Currently, the number of reported legal abortions is available for approximately 45 countries.

94. According to the latest data, reported legal abortions total about 15 million annually (table 5). Eighty per cent of legal abortions are performed in four countries: China (7.4 million), the Russian Federation (2 million), the United States and Viet Nam (both 1.2 million). The world total legal abortions should be interpreted as a rough estimate since the completeness of reporting in the countries with the largest number of abortions is unascertained. In particular, much uncertainty remains as regards the actual number of abortions performed in China. In 1998, the Ministry of Health estimated the number of abortions at 7.38 million, whereas the State Family Planning Commission reported 2.63 million abortions.

95. Countries where abortion is legal can be classified in three groups, based on the incidence of abortion. The large majority of countries, including China, fall into a range of 10-25 abortions per 1,000 women aged 15-44. Four European countries, namely, Belgium, Germany, the Netherlands and Spain, report very low levels of legal abortions (less than 10 per 1,000 women aged 15-44). At the other end of the spectrum, the abortion rate reaches about 60 per 1,000 women aged 15-44 in countries such as Belarus, the Russian Federation and Viet Nam. Also included in the high abortion group are a number of successor countries of the former Soviet Union such as Estonia, Kazakhstan, Latvia, Turkmenistan and Ukraine as well as Eastern and Central European countries such as Bulgaria, Hungary and Romania.

96. Clearly, in many countries of Eastern Europe and the former Soviet Union, women rely heavily on abortion to control fertility. In six such countries, at least one pregnancy in two is terminated by abortion.[2] High reliance on abortion to control fertility is also the case in Viet Nam where at least 4 pregnancies in 10 are aborted. Among Western countries, the highest levels of pregnancy termination are reported in Sweden — 26 abortions per 100 pregnancies — whereas the lowest level is observed in Belgium (1 abortion per 10 pregnancies).

Table 5
Reported legal abortions, most recent year

Country	*Year*	*Number of abortions (thousands)*	*Abortions per 1,000 women aged 15-44*
Albania	1999	16	22
Armenia	1999	14	15
Australia	1996	76	18
Azerbaijan	1999	21	11
Belarus	1999	135	58
Belgium	1997	13	6
Bulgaria	1999	72	43
Canada	1998	110	16
China	1998	7 380	24
Croatia	1999	15	15
Czech Republic	1999	37	17
Denmark	1998	17	15
Estonia	1999	15	48
Finland	1999	11	11
France	1997	164	13
Georgia	1999	18	15
Germany	1999	130	8
Hungary	1999	66	31
Iceland	1998	1	15
Israel	1999	19	15
Italy	1998	138	11
Japan	1999	337	13
Kazakhstan	1999	138	35
Kyrgyzstan	1999	18	16
Latvia	1999	18	34
Lithuania	1999	19	23
Netherlands	1998	24	7
New Zealand	1999	16	19
Norway	1998	14	15
Republic of Moldova	1999	28	27
Romania	1999	260	52
Russian Federation	1999	2 030	62
Singapore	1999	14	17
Slovakia	1998	21	21
Slovenia	1999	9	20
Spain	1998	54	6
Sweden	1999	31	18
Tajikistan	1999	21	15
TFYR of Macedonia[a]	1999	8	19
Turkmenistan	1997	33	32
Ukraine	1998	499	45
United Kingdom	1997	192	15
United States	1997	1 186	20
Uzbekistan	1999	58	10
Viet Nam	1999	1 200	63
Total		**14 696**	

Source: Population Policy Databank maintained by the Population Division of the United Nations Secretariat.

[a] The former Yugoslav Republic of Macedonia.

97. Abortion is a significant factor in women's reproductive lives. In most countries where abortion is legal, the proportion of women who have one abortion in their lifetime varies between 1 in 3 women and 1 in 2 women. In countries where the incidence of abortion is high, such as the Russian Federation, women have an average of over two abortions in their lifetime.

98. Abortion rates have basically remained unchanged in Western countries during the second half of the 1990s. In contrast, a downward trend was observed in the countries of Eastern Europe and the former Soviet Union. The most dramatic decrease was recorded in Romania where abortion rates dropped from 100 per 1,000 women aged 15-44 in 1995 to 52 per 1,000 in 1999.

99. Only a handful of recent estimates of the number of abortions in countries where abortion is legally restricted or illegal — namely, most countries of the developing world — can be found in the literature. Two such estimates are available, for a South Asian country and an Eastern Asian country: Bangladesh and the Philippines. Whereas in Bangladesh, abortion is illegal, except when saving the life of a woman, menstrual regulation has been available on request since 1979. Using indirect estimation techniques, Singh and others (1997) came up with a best estimate of 730,000 abortions for Bangladesh, a figure that translates into an abortion rate of 28 per 1,000 women aged 15-44. According to the same authors, the level of abortion would be quite similar in the Philippines based on a best estimate of about 400,000 abortions in 1994.

100. The most recent estimates for Latin American and Caribbean countries date back to 1989-1991 (Henshaw, Singh and Haas, 1999b; Singh and Wulf, 1994). Such estimates are available for six countries — Brazil, Chile, Colombia, the Dominican Republic, Mexico and Peru — and based on abortion-related hospitalization data. About 2.8 million abortions were estimated to occur in these countries annually. Estimated abortion rates are quite high in five countries: Brazil (41 per 1,000 women aged 15-44), Chile (50 per 1,000 women aged 15-44), Colombia (36 per 1,000 women aged 15-44), Dominican Republic (47 per 1,000 women aged 15-44) and Peru (56 per 1,000 women aged 15-44). In these countries, the proportion of pregnancies terminated would therefore be in the range of from 1 pregnancy in 4 to 1 pregnancy in 3. In Mexico, the abortion rate was lower and stood at 25 per 1,000 women aged 15-44.

101. Egypt is the only Northern African country for which indirect estimates of the abortion level exist. An analysis of medical abstracts on admissions to the obstetrics and gynaecology departments conducted in 1995 showed that 1 of every 5 patients was a woman admitted for treatment of an induced or spontaneous abortion (Huntington and others, 1998). This figure yielded an estimated total number of induced abortions of over 300,000.

102. Information on induced abortions in sub-Saharan Africa is extremely fragmentary. In 1996, a survey conducted at a nationally representative sample of 672 health facilities in Nigeria that were considered potential providers of abortion services led to an estimate of 610,000 abortions and an abortion rate of 25 per 1,000 women aged 15-44 (Henshaw and others, 1998). In 1998, in Bamako (Mali), 1 in 5 female patients interviewed at health-care centres declared that they had had at least one abortion, whereas the corresponding figure for Abidjan (Côte d'Ivoire) was 1 in 3 patients (Konaté and others, 1999; Guillaume and others, 1999). Surveys in both

Nigeria and Côte d'Ivoire clearly showed that abortion rates tend to be much lower in rural and poorer areas.

Demographic characteristics

103. In Northern America and Western Europe, as well as in Australia and New Zealand, unmarried women account for the largest proportions of abortions in 10 out of 13 countries for which data are available, ranging from 61 per cent in Norway up to 81 per cent in the United States. Survey data also suggest that in Africa, the majority of women having abortions are unmarried.

104. In contrast, in Eastern European countries and countries of the former Soviet Union, most women having abortions are married and represent from 61 per cent in the Czech Republic to over 95 per cent in some South-central Asian countries. All other Asian and Latin American countries for which data are available display a similar pattern with the exception of Brazil, where the majority of women having abortions are unmarried.

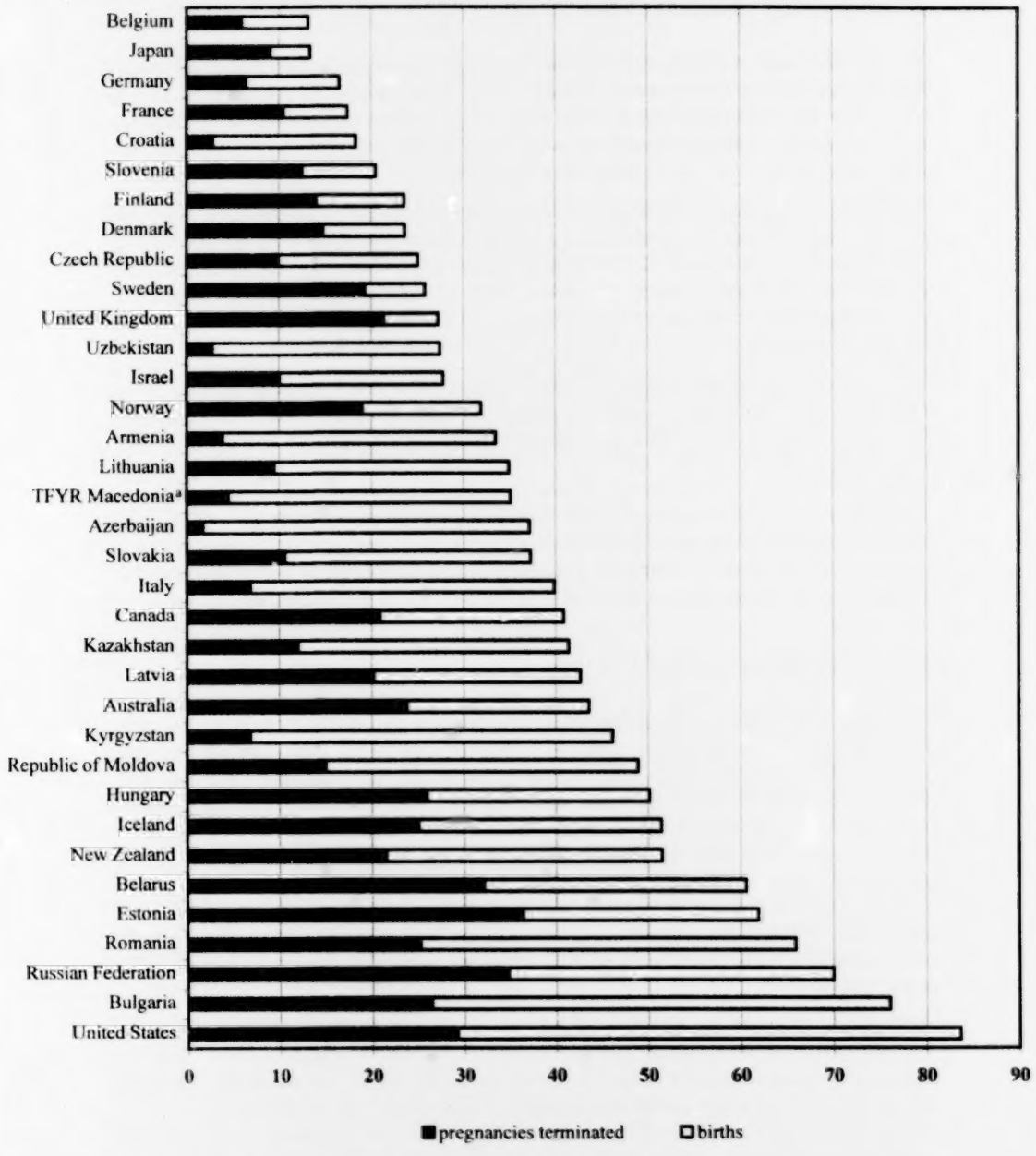
105. In most countries, women in their twenties have the highest pregnancy rates and account for the largest number of abortions. Also, the proportion of pregnancies that are terminated is typically the highest among women aged 40 and older as well as among adolescents. By and large, where abortion is legal, statistics provide evidence that, in most countries, the incidence of abortion among adolescents is in line with the overall level of abortion. According to the most recent official figures, abortion among adolescents accounts for 3-20 per cent of total reported legal abortions in 39 out of 40 countries for which data are available. Figure IV shows the incidence of pregnancies and abortion among adolescents in selected countries.

Recent changes in abortion laws

106. The overwhelming majority of countries (189 out of 193 countries) permit abortions to be performed to save the pregnant woman's life (United Nations, 2001b, 2001c, forthcoming). Four States — Chile, El Salvador, the Holy See and Malta — prohibit abortion. However, the breadth of conditions under which abortion may legally be performed greatly vary. Abortion laws and policies are significantly more restrictive in the developing world than in the developed world. In the developed countries, abortion is permitted upon request in about two thirds of the countries (31 countries) as well as for economic or social reasons in 3 out of 4 countries. In contrast, only 1 in 7 developing countries (21 countries) allows abortion upon request and only 1 in 6 countries allows abortion for economic or social reasons.

107. Since 1990, 29 countries — 8 developed countries, 15 developing countries and 6 countries with economies in transition — have modified their laws or regulations concerning abortion. In 23 countries, changes consisted in repealing restrictive provisions. In addition, health authorities have approved use of Mifepristone (RU-486) for pregnancy termination in 18 countries, while clinical trials have been authorized in another 6 countries (table 6).

Figure IV. **Adolescent pregnancy outcomes, 1999 or most recent year**
(Per 1,000 women aged 15-19)



Source: Population Division of the United Nations Secretariat.

NOTE: Pregnancies have been estimated as the sum of births and abortions for a given calendar year.

[a] The former Yugoslav Republic of Macedonia.

Table 6
Legal status of Mifepristone (RU-486)

(a) Use of Mifepristone approved by national health authorities
Austria (1999)
Belgium (1999)
China (1992)
Denmark (1999)
Finland (1999)
France (1989)
Germany (1999)
Greece (1999)
Israel (1999)
Luxembourg (1999)
Netherlands (1999)
Norway (2000)
Russian Federation (2000)
Spain (2000)
Switzerland (2000)
Ukraine (2000)
United Kingdom (1991)
United States (2000)
(b) Clinical trials of Mifepristone authorized
Canada
Cuba
India
Italy
Tunisia
Viet Nam

Source: Population Policy Databank maintained by the Population Division of the United Nations Secretariat.

108. In the developed countries, abortion has been legal to varying degrees and generally accepted for decades. In the late 1980s and early 1990s, growing concern regarding the health impact of illegal abortion grew among national health authorities and prompted decisions to broaden the grounds for permitting abortion so as to include abortion upon request in such countries as Albania, Bulgaria and Romania. In the Russian Federation and Hungary, legislative developments towards a broadening of the grounds for permitting abortion also echoed the difficult economic and social conditions experienced by women. On the other hand, two

European countries, Poland and Germany, have passed more restrictive abortion legislation.

109. In 1996, Japan adopted the Maternal Protection Law, a significantly amended version of the 1948 Eugenic Protection Law. In the United States, intense legal activity has been devoted to restricting the ability of minors to obtain abortions at the State level. As of March 2001, such restrictions had been introduced in 41 States. On the other hand, restrictions have been enacted covering various aspects of the picketing of abortion clinics by pro-life protesters at both the federal and State levels.

110. In Latin America, abortion is permitted on request, in only two countries: Cuba and Guyana; for socio-economic reasons only, in the Mexican State of the Yucatán; on grounds of foetal impairment only, in Panama and a number of other Mexican States; and in cases of pregnancy as a result of a crime, in seven countries (including the Federal District of Mexico), two of which require that the victim be mentally incompetent. Of the remaining Latin American countries, two allow abortion for health reasons and eight to save the life of the pregnant woman.

111. In recent years, there have been numerous proposals for reform in Latin American countries, very few of which have been successful. In 1995, Guyana legalized abortion on broad grounds. In contrast, on the eve of the International Conference on Population and Development in 1994, Argentina modified its Constitution to include the defence of life from conception. In El Salvador, the abortion provisions of the new Penal Code adopted in 1997 removed all exceptions to the prohibition against abortion that had previously existed and prohibited abortions completely.

112. In Africa, Botswana (1991), Seychelles (1994), Burkina Faso and South Africa (1996) significantly amended their existing legislation or enacted new abortion laws along more liberal lines while Equatorial Guinea adopted more restrictive abortion legislation in 1991. Currently, abortion is permitted on request in only 3 out of 53 African countries: Cape Verde, South Africa and Tunisia. One country, Zambia, permits abortion for economic and social reasons. Eleven African countries permit abortion on grounds of foetal impairment and 12 countries when pregnancy has resulted from rape or incest. Twenty-seven African countries permit abortion on mental health grounds and 28 countries to preserve the woman's physical health.

113. In Asia, 17 countries permit abortion only to save the woman's life, 16 countries permit abortion upon request, and 13 permit abortion under certain circumstances. Recent developments include the enactment of abortion legislation that conforms to Islamic law in the Islamic Republic of Iran (1991 Criminal Code) and Pakistan (1989) as well as the new legislation legalizing abortion in Cambodia in 1997. Both Indonesia (1992) and Malaysia (1989) amended their legislation to allow abortion to be performed on medical grounds. In 1989, Mongolia amended its Health Law to provide that becoming a mother was a matter of a woman's own decision and she could therefore obtain an abortion on request during the three first months of pregnancy. In 1991, the Sudan modified its Penal Code to allow abortion to be performed in case of rape or if the unborn child had died in the mother's womb.

114. Between 1989 and 1991, the Government of Viet Nam approved a number of laws that regulated abortion in various ways including the Law on the Protection of

Public Health which provided that "women shall be entitled to have an abortion if they so desire" as well as various decrees making birth control devices and public-health services for abortions free of charge to large segments of the population.

115. In an attempt to prevent "female foeticide", the Government of India enacted country-wide legislation in 1994 that restricts the performance of prenatal diagnostic techniques to cases involving serious diseases and abnormalities and prohibits practitioners from revealing the sex of a foetus in any manner. The enforcement of this legislation — which came into force in 1996 — has reportedly been problematic.

Unsafe abortion

116. Unsafe abortion is defined as a procedure for terminating an unwanted pregnancy either by persons lacking the necessary skills or in an environment lacking the minimal medical standards or both (World Health Organization, 1992a). It is estimated that between 10 and 50 per cent of all women who undergo unsafe abortions need medical care for complications. According to estimates by the World Health Organization (WHO) for 1995-2000, unsafe abortion results in an estimated annual 78,000 maternal deaths, and hundreds of thousands of disabilities, the vast majority of which take place in the developing countries (World Health Organization, 1998). Thus, globally, one maternal death in eight is probably due to abortion-related complications. At a regional level, abortion-related mortality ranges from one maternal death in eight in Africa and Asia to one maternal death in six in Europe and one maternal death in five in Latin America and the Caribbean.

117. Most countries where the incidence of either unsafe abortion, or induced abortion overall, is high are countries where family planning information, services and contraception are unavailable or largely inadequate (Indriso and Mundigo, 1999). Abortion prevention rests, indeed, on the availability of family planning information, counselling and services. During the 1990s, increased concern with teenage pregnancy and abortion led to shifting the policy emphasis to reaching out beyond the married population — the primary, and often the only, target of family planning programmes — to young women and men. However, it is too early to obtain a sense of the implementation and impact of such programmes.

118. Family planning counselling and services have been offered within the framework of post-abortion care in a number of countries with a view to preventing repeat abortions. After such services had been introduced in selected hospitals, the proportion of patients who received family planning counselling reached 97 per cent in Bolivia, 94 per cent in Burkina Faso, 68 per cent in Kenya, 86 per cent in Mexico, and 78 per cent in Peru (Huntington, 2000). The programme was less successful in Senegal where only about one third of patients were counselled. In Kenya, it was found that having ward staff providing family planning information and services was far more effective than having wards visited by maternal and child health/family planning providers.

119. The second type of interventions aimed at reducing abortion-related morbidity and mortality lies in making abortion safer. From a medical point of view, abortion safety primarily depends on the gestational age at abortion — the earlier the abortion, the safer — and the method used, as well as on the prompt and appropriate management of complications (Grimes, 2000).

120. In a number of developing countries that have legalized abortion, the procedure is neither broadly available nor uniformly safe. In Africa, difficulties arise from a number of social, cultural and institutional forces. In Zambia, for example, complicated procedural requirements, in addition to inadequate services, have perpetuated reliance on illegal abortion. Formal services tend to be rejected by young people because of the lack of confidentiality of the procedure and the prevalent stigma on abortion (Webb, 2000). In South Africa, most nurses and doctors have not been supportive of the new Termination of Pregnancy Act and a significant proportion of them have claimed conscientious objection to exempt themselves from involvement in abortion-related care (Harrison and others, 2000). As a result, abortion services remain unavailable in most of the country.

121. In India, large disparities in the geographical distribution of services have left sizeable segments of the population with little access to abortion services. Four large northern States — Bihar, Madhya Pradesh, Rajasthan and Uttar Pradesh, which account for over 40 per cent of the country's population — are host to 16 per cent of all approved centres under the Medical Termination of Pregnancy Act (Barge and others, 1998).

V. Maternal mortality and morbidity

122. Recent global estimates suggest that 515,000 women die of pregnancy-related complications and causes each year, almost all of them in the developing world. During the 1990s, a number of international conferences set goals for a reduction of maternal mortality. The goal of reducing maternal mortality was further endorsed by 149 heads of State at the Millennium Summit of the United Nations in 2000 (see para. 19 of the United Nations Millennium Declaration contained in General Assembly resolution 55/2). This unprecedented global consensus is indicative of the importance that Governments and the international health and development community give to the health of women and of their children and creates additional stimulus for attention to the accurate monitoring of progress in the attainment of this goal in individual countries and across the world.

Definitions

123. The Tenth Revision of the International Statistical Classification of Diseases and Related Health Problems (ICD-10) defines maternal death as the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes (World Health Organization, 1992b). Direct obstetric deaths result from obstetric complications of pregnancy or from interventions, omissions or incorrect treatment and are usually due to one of five major causes: haemorrhage, sepsis, eclampsia, obstructed labour and complications from unsafe abortion. Indirect obstetric deaths are those resulting from previous existing disease or disease that developed during pregnancy and were aggravated by the physiologic effects of pregnancy, and are mostly associated with malaria, HIV/AIDS and cardiovascular disease.

Measures and measurement

124. The most commonly used measure of maternal mortality is the number of maternal deaths per 100,000 live births. Although it has traditionally been called a rate, this is actually a ratio and is now usually called such by researchers. However, for the sake of historical consistency, ICD-10 continues to use the term "rate" for this measure.

125. Measuring maternal mortality requires knowledge about deaths of women of reproductive age (15-49 years), the medical cause of death, and also whether or not the woman was pregnant at the time of death or had recently been so (AbouZahr, 1998). In practice, however, few countries count deaths; even fewer accurately register the cause of death; and fewer still systematically note pregnancy status on the death form. Where civil registration systems are absent or inadequate, maternal mortality can be estimated by incorporating questions on pregnancy and deaths into large-scale household surveys. The disadvantage is that large sample sizes are required, making this strategy extremely expensive and time-consuming (see, for example, Agoestina and Soejoenoes, 1989). The Sisterhood Method (Graham, Brass and Snow, 1989) has been developed with the aim of reducing sample size requirements; a few questions about the survival of respondents' sisters are added on to existing household surveys (Rutenberg and Sullivan, 1991). However, survey methods for estimating maternal mortality produce results with wide margins of error which cannot, therefore, be used for regular and short-term monitoring.

126. Problems with underreporting and misclassification are common to all methods for measuring maternal mortality. For this reason, most experts agree that reliably ascertaining maternal deaths necessitates some form of triangulation, in other words, bringing together data from different sources. The Reproductive Age Mortality Survey (RAMOS) (World Health Organization, 1987; Greenwood and others, 1987) uses multiple sources of information — civil registers, health facility records, community leaders, religious authorities, undertakers, cemetery officials, schoolchildren — to identify all deaths. Interviews with household members and health-care providers and facility record reviews are used to classify deaths as maternal or not (verbal autopsy).

Levels

127. Only a few countries have accurate national-level data on maternal mortality. WHO and the United Nations Children's Fund (UNICEF), with the participation of the United Nations Population Fund (UNFPA), have developed an approach to estimating maternal mortality that seeks both to generate estimates for countries with no data and to correct available data for underreporting and misclassification. The strategy involves adjusting available country data according to the source of the data while developing a simple model to generate estimates for the 55 countries without reliable information. The most recent application of the method generated estimates pertaining to 1995.

128. The estimated number of maternal deaths in 1995 for the world was 515,000 (table 7). Of these deaths, over half (273,000) occurred in Africa, about 42 per cent (217,000) in Asia, about 4 per cent (22,000) in Latin America and the Caribbean, and less than 1 per cent (2,800) in the more developed regions of the world. In terms

of the maternal mortality ratio, the world figure is estimated to be 400 per 100,000 live births. By region, the maternal mortality ratio was highest in Africa (1,000), followed by Asia (280), Oceania (260), Latin America and the Caribbean (190), Europe (28) and Northern America (11).

Using civil registration data to assess trends

129. Only a few countries — accounting for under one quarter of the world's births (and less than 7 per cent of births if China is excluded) — have maternal mortality trend data derived from the civil registration system. All of these countries have relatively low levels of maternal mortality, at under 100 per 100,000 live births since the early 1980s. Furthermore, even though the coverage of vital events is considered complete (generally defined as covering 90 per cent or more of the total), civil registration systems routinely fail to identify correctly a proportion of maternal deaths (Atrash, Alexander and Berg, 1995). Bearing these cautions in mind, it is possible to examine maternal mortality trends derived from civil registration in some countries in Asia and Latin America and the Caribbean (figures V and VI). Trend data are also available for China, where RAMOS studies have been used to estimate maternal mortality since 1989.

130. Among developing countries, only Argentina, Chile, China, Costa Rica, and Uzbekistan were able to demonstrate sustained reductions in maternal mortality over the past decade. Elsewhere in the developing world, there appears to have been a relative stagnation in maternal mortality since 1990. In some settings, there have been apparent increases in levels but this is thought to be a result of improved reporting.

131. The apparent transient increases in maternal mortality in some countries of Eastern Europe (for instance, Latvia) may also be due to improved case-reporting (see figure VII). An exception is Romania, where the precipitous fall in maternal mortality observed in 1989-1990 reflects the liberalization of the law regarding availability of safe abortion. Prior to 1989, strongly pronatalist policies, lack of reliable contraception, prohibition of abortion, and economic difficulties produced extremely high levels of abortion-related mortality (Royston and Armstrong, 1989).

Table 7
Estimates of maternal mortality by region, 1995

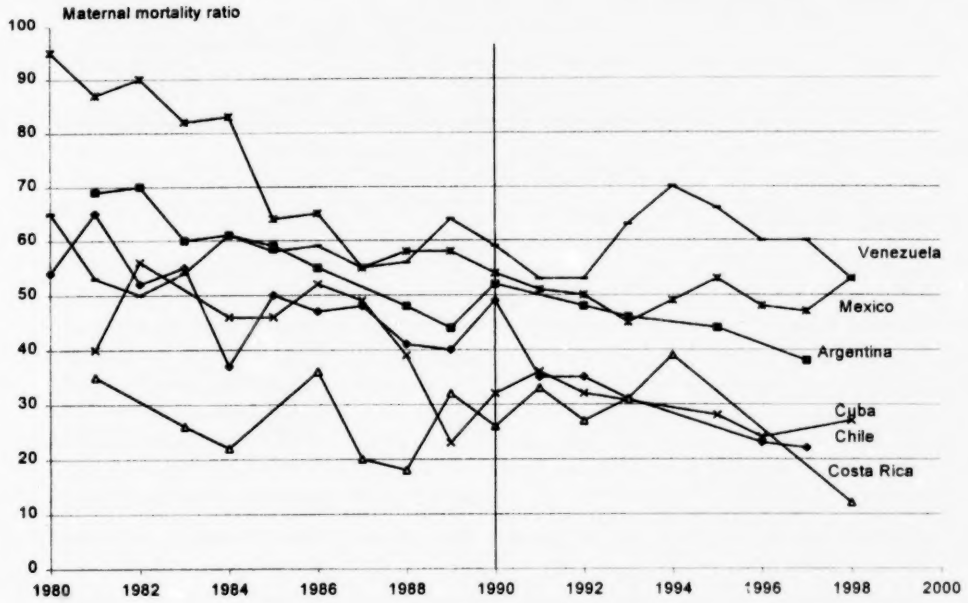
Region	*Maternal mortality ratio (maternal deaths per 100,000 live births)*	*Number of maternal deaths*	*Lifetime risk of maternal death: 1 in:*
World	400	515 000	75
More developed regions[a]	21	2 800	2 500
Less developed regions	440	512 000	60
Least developed countries	1 000	230 000	16
Africa	1 000	273 000	16
Eastern Africa	1 300	122 000	11
Middle Africa	1 000	39 000	13
Northern Africa	450	20 000	49
Southern Africa	360	4 500	65
Western Africa	1 100	87 000	13
Asia[a]	280	217 000	110
Eastern Asia	55	13 000	840
South-Central Asia	410	158 000	55
South-Eastern Asia	300	35 000	95
Western Asia	230	11 000	95
Europe	28	2 200	2 000
Eastern Europe	50	1 600	1 100
Northern Europe	12	140	3 900
Southern Europe	12	170	5 000
Western Europe	14	280	4 000
Latin America and the Caribbean	190	22 000	160
Caribbean	400	3 100	85
Central America	110	3 800	240
South America	200	15 000	150
Northern America	11	490	3 500
Oceania[a]	260	560	260
Australia/New Zealand	8	25	5 500
Melanesia	310	560	60
Micronesia	[b]	[b]	[b]
Polynesia	33	5	700

Source: World Health Organization, *Maternal Mortality in 1995: Estimates Developed by WHO, UNICEF, UNFPA* (Geneva, 2001).

[a] Australia, New Zealand and Japan being excluded from the regional tables but included in the total for the more developed regions.

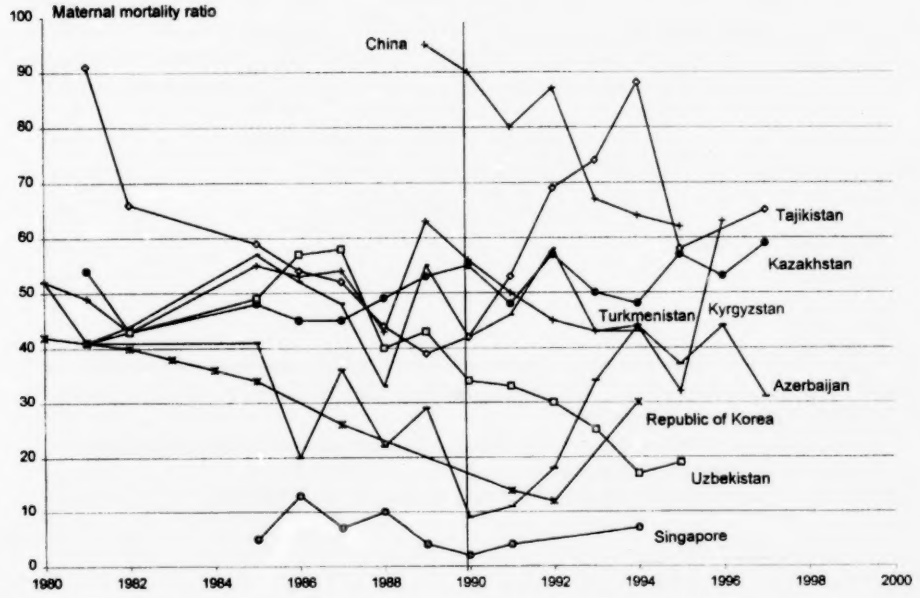
[b] Estimates not developed for countries with total population below 300,000..

Figure V. Trends in maternal mortality, selected countries in Latin America, 1980-1999



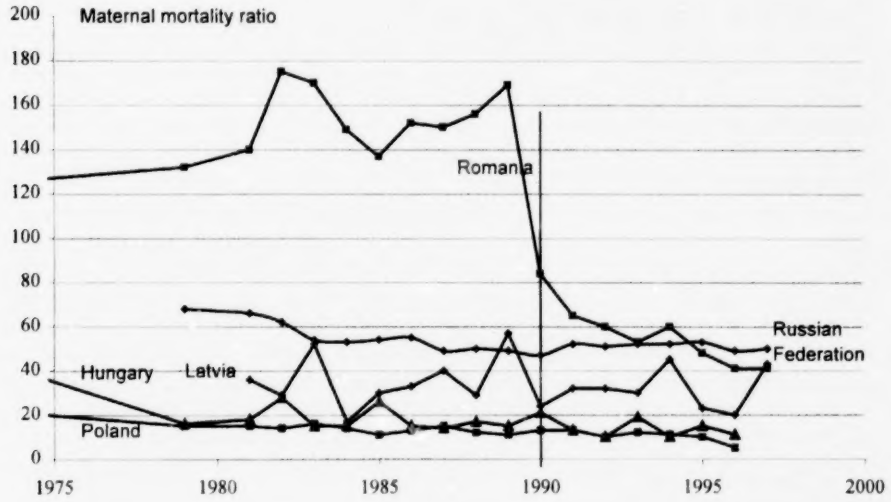
Source: World Health Organization/United Nations Children's Fund databases.

Figure VI. Trends in maternal mortality, selected countries in Asia, 1980-1997



Source: World Health Organization/United Nations Children's Fund databases.
Note: Data for China derived from Reproductive Age Mortality Surveys.

Figure VII. Trends in maternal mortality, selected countries in Eastern Europe, 1974-1997



Source: World Health Organization/United Nations Children's Fund databases.

Using process indicators to assess trends

132. Where maternal mortality is measured using household surveys, the margins of uncertainty are such that it is not possible to draw firm conclusions about the direction of trends. For assessing progress in these countries, process indicators are needed for regular monitoring. The percentage of births attended by skilled health personnel is one potential process indicator that is strongly related to levels of maternal mortality (World Health Organization, 1999; De Browere, Tonglet and Van Lerberghe, 1998). The source of the information is generally the Demographic and Health Surveys, the Pan Arab Project for Child Development (PAPCHILD) or reproductive health surveys that provide a standardized methodology and sampling framework along with strict criteria regarding the maintenance of data quality. The skilled health-care personnel category comprises only doctors and nurses/midwives who have the necessary midwifery skills[1] (World Health Organization, 1999).

133. Trend data on the presence of skilled attendants at delivery are available for 53 countries that have a minimum of two data points derived from sources using similar estimation methods, generally Demographic and Health Surveys. Overall, these countries account for 76 per cent of live births, although this figure varies considerably by region. Table 8 shows the trend in proportions of deliveries assisted by skilled attendants for major regional groupings. Because data are available for different years and cover a different time period for each country, adjustments to a common 10-year period, 1989-1999, have been made. The observed rate of change was used to project data for the end points in 1989 and 1999. The regional averages are weighted by the numbers of live births.

Table 8
Trends in proportion of deliveries assisted by skilled attendants for 53 countries, 1989-1999

Region	Number of countries with trend data[a] 1999	Percentage of births in the region covered by the data 1999	Percentage of births assisted by skilled attendants 1989	1999	Annual average rate of change[b] (percentage) 1989-1999
Sub-Saharan Africa	17	59	44	44	0.1
Northern Africa and Western Asia	9	56	49	63	2.5
Asia	7	89	39	48	2.2
Latin America and the Caribbean	18	74	74	81	0.9
Total	**53**[c]	**76**[d]	**45**	**52**	**1.7**

Source: C. AbouZahr and T. Wardlaw, "Maternal mortality at the end of a decade: sign of progress?", *Bulletin of the World Health Organization* (Geneva), vol. 79, No. 6 (2001).

[a] Data published up to April 2001.

[b] Weighted average of individual country data. Regional averages were weighted by the numbers of live births.

[c] Including two countries from Central and Eastern Europe and the Commonwealth of Independent States.

[d] Data for developing countries only.

134. In general, only modest improvements in coverage of care at delivery have occurred, with an average annual increase of 1.7 per cent over the period 1989-1999. In sub-Saharan Africa, there has been barely any perceptible change over the 10-year period. On the other hand, countries of Asia, and Western Asia and Northern Africa, show significant improvements, with annual average increases of 2.2 per cent and 2.5 per cent, respectively.

135. In 1999, at the twenty-first special session of the General Assembly for the five-year overall review and appraisal of the implementation of the Programme of Action of the International Conference on Population and Development, it was agreed that all countries should strive to ensure that 80 per cent of deliveries be assisted by skilled attendants by 2005 (General Assembly resolution S-21/2, annex, sect. IV, para. 64). On current trends, only the countries of the Latin American region will attain this goal. Countries in Western Asia and Northern Africa will not attain the goal until around 2010 and Asian countries as a whole will fall short of the goal even in 2015. In sub-Saharan Africa as a whole, no progress towards the goal is currently discernible.

Causes of maternal mortality and related morbidities

136. Haemorrhage is estimated to account for one quarter of total maternal deaths, sepsis for 15 per cent, hypertensive disorders of pregnancy and abortion complications for 13 per cent each, and obstructed labour for 7 per cent. Abortion-related mortality is particularly important in parts of Latin America and the Caribbean, and may account for up to 30 per cent of all maternal deaths in some

settings. Other direct causes of death include ectopic pregnancy and embolism. Direct obstetric deaths may also be associated with medical interventions, especially anaesthesia. Indirect causes account for some 20 per cent of total deaths though the composition of causes varies from region to region, with malaria or HIV/AIDS being particularly important in parts of sub-Saharan Africa. There is increasing evidence that pregnancy-related deaths may also occur as a result of domestic violence.

137. For every woman who dies as a result of pregnancy-related complications, many more suffer debilitating sequelae which may remain with them for the rest of their lives. Currently available epidemiological tools do not permit precise estimation of the burden of disease and disability associated with pregnancy-related complications but it is known to be significant. For example, women who suffer amniotic fluid embolisms or cerebrovascular disorders may suffer residual neurological impairment. Rupture of the uterus or severe haemorrhage may necessitate hysterectomy with the consequent loss of fertility and possible psychological effects (Denmissie and others, 2000). The long-term effects of post-partum haemorrhage may include severe anaemia and even loss of pituitary function (Sheehan's syndrome). A widespread and debilitating condition associated with sepsis, particularly post-partum sepsis, is pelvic inflammatory disease and subsequent infertility. Post-partum depression and puerperal psychosis are not uncommon; post-partum psychosis is a severe disturbance which may occur with a frequency of 1-2 per 1,000 births (AbouZahr, 1998).

138. Underlying these clinical causes of death and disability are the causes related to lack of access to skilled medical care. Most obstetric complications are amenable to relatively simple medical interventions if women are able to benefit from the care of a skilled health-care worker, particularly during the critical time of labour and delivery. In developing countries however, many women are assisted only by relatives or by traditional birth attendants; many deliver unaided and alone. Globally, only 53 per cent of women deliver with the assistance of a professional (a midwife, nurse or doctor), and only 40 per cent of women in developing countries give birth in a hospital or health centre (World Health Organization, 1999).

139. Underlying causes associated with high maternal mortality include the low social status of women which limits their access to economic resources and basic education, and impedes their ability to make decisions related to their health and nutrition. Lack of decision-making power and of alternative opportunities restricts many women to a life of constant childbearing. Excessive physical work coupled with poor diet also contributes to poor maternal health outcomes.

Interventions to reduce maternal mortality and morbidity

140. A consensus statement issued by the United Nations agencies indicates the needed actions to reduce maternal mortality (World Health Organization, 1999), namely, prevention and management of unwanted pregnancy and unsafe abortion; use of skilled care during pregnancy and childbirth; and access to referral care when complications arise.

141. Addressing the challenge of maternal mortality and morbidity requires a functioning health-care system together with interventions at the community level, to ensure that pregnancies are wanted and that women have access to the care they

need when they need it, and at the policy level, to provide the enabling environment within which maternal health-care services can be effectively delivered. Access is dependent both on transport and on a range of important economic, social and cultural factors, including women's ability to decide when and where to seek care.

142. A body of experience is now available to describe the many interrelated factors that have to be in place if progress in reducing maternal and newborn morbidity and mortality is to be made. Priorities need to be clearly defined and programme strategies developed that are focused and feasible for Governments in resource-constrained settings. Interventions need to be evidence-based and to address all major causes of maternal death, including abortion complications. The particular needs of vulnerable populations, such as adolescents, need to be met and relevant technical and programming guidelines, training curricula and other tools for effective programmes made widely available. The issue of HIV/AIDS infection among women and their babies must be addressed as must the risks associated with other diseases such as malaria. Most important, there is a need for continuing and sustained commitment on the part of government decision makers and ongoing resource allocation at both national and international levels.

VI. Sexually transmitted infections (STIs)

143. Sexually transmitted infections (STIs)[3] are among the most common causes of illness in the world and they have far-reaching health, social and economic consequences for many countries. Not only are they a cause of acute infections in adults, but they may also result in long-term morbidity for both women and men, with a higher burden of disease in women. Long-term sequelae such as infertility occur in both women and men, but women suffer the resultant socio-economic consequences more. As STI-related pelvic inflammatory disease (PID) damages the fallopian tubes, women with STI have an increased likelihood of developing ectopic pregnancies compared with women without STI. Cervical cancer, the commonest cancer in women in developing countries, is caused by human papilloma virus infection. Infants also bear the consequences of STI. Some infections are associated with low birth weight, prematurity, congenital infections such as syphilis and foetal wastage. Infections of the newborn's eyes (ophthalmia neonatorum) can lead to blindness if not treated early and adequately.

144. The appearance of HIV and AIDS has further increased the need to control STI. There is a strong correlation between conventional STI and HIV transmission. Both ulcerative and non-ulcerative STI have been shown to increase the risk of sexual transmission of HIV. In addition, HIV infection complicates the management and control of other STIs such as chancroid, genital warts and genital herpes.

Vulnerability to STIs

145. WHO estimates that 340 million new cases of STI occurred in 1999. The largest number of new infections occurred in Asia, followed by sub-Saharan Africa and Latin America and the Caribbean (table 9). The highest rates of STI are generally found in urban men and women in their most sexually active years, that is to say, between the ages of 15 and 35. Women become infected at a younger age than men.

Table 9
Estimated prevalence and annual incidence of curable sexually transmitted infections by region, 1999[a]

Region	*Population aged 15-49 (millions)*	*Prevalenc (million*	*Prevalence (per 1,000)*	*Annual incidence (millions)*
Northern America	156	3	19	14
Western Europe	203	4	20	17
Northern Africa and Western Asia	165	3.5	21	10
Eastern Europe and Central Asia	205	6	29	22
Sub-Saharan Africa	269	32	119	69
South and South-eastern Asia	955	48	50	151
East Asia and the Pacific	815	6	7	18
Australia and New Zealand	11	0.3	27	1
Latin America and the Caribbean	260	18.5	71	38
Total	**3 040**	**116.5**		**340**

Source: World Health Organization, *Global Prevalence and Incidence of Selected Curable Sexually Transmitted Infections: Overview and Estimates* (Geneva, 2001).

[a] Chlamydia, gonorrhoea, syphilis and trichomoniasis.

146. Adolescents[4] are at a special risk of exposure to STI and HIV, as their sexual relations are often unplanned and sporadic and are sometimes a result of pressure or force (World Health Organization, 1986). Their sexual relations typically occur before they have the experience and skill to protect themselves, and before they have adequate information about STI and adequate access to STI services and condom supplies. For example, in a number of studies, young age was found to be an independent predictor of chlamydial infection after controlling for behavioural factors (Arno and others, 1994).

147. Adolescent women are more vulnerable than young men and adults for biological, social and economic reasons. They are especially vulnerable to infections of the cervix because the physiologic development of a natural barrier against infection (the cervix) is immature. Female adolescents are also more vulnerable than young men and adults for social and economic reasons. For example, early sexual activity, before menarche, as in the case of child brides, is associated with an increase in prevalence rates of STI and PID (Duncan and others, 1990). Many adolescents do not use a barrier contraceptive either through ignorance or because access is limited for social and/or economic reasons.

148. In addition, vulnerable populations that are at risk of STI include sex workers, clients of sex workers, men who have sex with men, prisoners and substance users. In targeting STI care to all vulnerable populations, appropriate, acceptable and accessible health services should be provided, with additional care taken not to stigmatize these individuals.

Trends in STIs

149. The exact magnitude of the STI burden at national level is frequently unknown. Although passive STI surveillance systems exist in some countries, the data are not always reliable or complete. The quality and completeness of the available data and estimates depend on the quality of STI services, the extent to which patients seek health care, the intensity of case-finding, the accuracy of diagnosis and the quality of reporting.

150. More than 20 pathogens are transmissible through sexual intercourse. Many of them are curable with appropriate antimicrobial treatment. However, in spite of the availability of effective treatments, bacterial STIs are still a major public-health concern in both industrialized and developing countries.

151. Syphilis is the classic example of an STI that can be successfully controlled by public-health measures because a sensitive diagnostic test and an effective and affordable treatment are available. The testing and treatment of pregnant women for syphilis is the most reliable method of preventing congenital syphilis. The rates for syphilis have been declining in the United States since 1992. Syphilis rates continue to be low in Western Europe, but there is an epidemic in Eastern Europe and the newly independent States of the former Soviet Union. Rates are high in Asia and Africa.

152. Gonorrhoea, a common STI, especially in developing countries, is usually asymptomatic in up to 80 per cent of women and 10 per cent or more of men. It is primarily an infection of the genital tract but also infects other organs such as the eyes, the rectum and the joints. It is an important cause of infertility and blindness in newborns.

153. In some developing countries, for example, Jamaica and Malawi, the prevalence of gonorrhoea is between 15-20 per cent among attendees at antenatal clinics. In contrast, some countries in Europe, such as Sweden, showed a steady decline in incidence with the introduction of preventive measures based on information, treatment and elimination of risk factors (Cronberg, 1993). However, in 1997, there was an increase for the first time since 1976. The core groups infected are heterosexual teenagers and homosexual men (Berglund, Fredlund and Giesecke, 2001). Western Europe showed a significant decline, though there has been a steady increase in London (United Kingdom) since 1997. Eastern Europe and the newly independent States of the former Soviet Union show an increase, following the dramatic socio-economic and political changes and the liberalization of sexual behaviour (Borisenko, Tichonova and Renton, 1999). In Australia, notification of gonorrhoea infection has doubled since 1991.

154. Chlamydia is a common cause of non-gonococcal urethritis (NGU) among men and, among women, of PID with subsequent risk of infertility. The highest prevalence of chlamydia is observed among female adolescents (Bunnell and others, 1999; Burstein and others, 1998) and the association with young age (Cook and others, 1999) highlights the importance of screening sexually active young women in order to prevent infertility. However, resources for screening for chlamydia are not available in most countries. In the United States, it is the most common notifiable infectious disease. The prevalence and incidence remain low in the Nordic countries, following wide-scale screening programmes in the 1970s.

155. Trichomoniasis is a common cause of vaginal discharge in women and is often asymptomatic in men, but may cause NGU. In spite of the fact that trichomoniasis is the most common curable STI, data on prevalence and incidence are limited. Trichomoniasis is associated with adverse birth outcomes such as premature rupture of the membranes and delivery, and low birth weight (Cothc and others, 1997). Though not conclusive, evidence is accumulating that suggests that vaginal trichomoniasis may be associated with the risk of increased HIV seroconversion in women (Laga and others, 1993).

156. Anogenital herpes is caused mainly by herpes simplex type 2 virus (HSV2). HSV2 prevalence varies widely, with generally higher rates in developing than in developed countries and in urban than in rural areas. High rates are seen in sub-Saharan Africa and the Caribbean, with a prevalence in adults of about 50 per cent in many countries. Overall, prevalence is higher in women compared with men, especially among young people (Kamali and others, 1999; Fleming and others, 1997; Obasi and others, 1999). In industrialized countries, prevalence is higher in the United States (22 per cent in adults) (Krone and others, 2000) compared with Europe (generally less than 15 per cent). The advent of HIV has brought about an increase in the prevalence of genital herpes, especially in developing countries. Accumulating data suggest that HSV2 may be responsible for a substantial proportion of new HIV infections in some parts of Africa.

Prevention and care

157. The objectives of STI prevention and care are to reduce the prevalence of STIs by interrupting their transmission, reducing the duration of infection and preventing the development of complications in those infected.

158. Primary prevention prevents the acquisition of infection and resulting illness. It is promoted through health education, and involves practices such as safer sex behaviour, including the use of condoms, and abstinence. Primary prevention messages apply equally to HIV and other STIs. Secondary prevention involves treating infected people to prevent transmission to others. Except for HIV and the viral STIs, treatment cures the infection and interrupts the chain of transmission by rendering the patient non-infectious. Secondary prevention can also enhance the control of viral infections, however, through counselling (to prevent transmission) and possibly non-curative treatment (which may make a person less infectious).

159. Effective management of STI is one of the cornerstones of STI control, as it interrupts the transmission of infection and prevents the development of complications and sequelae. Appropriate treatment of STI patients at their first encounter with a health-care provider is therefore an important public-health measure. When this involves adolescent patients, there is the potential to influence future sexual behaviour and treatment-seeking practices at a critical stage of development.

160. Laboratory diagnosis of STI is ideal but difficult in many settings. It places constraints on time, resources and access to treatment. In settings where laboratory facilities are available, there must be suitably qualified personnel with adequate training to perform technically demanding procedures, and the establishment of external quality control is mandatory.

161. A clinical aetiologic diagnosis that is based on a physician's clinical experience has been shown to often be inaccurate even among highly experienced STI specialists. They fail to make the correct diagnosis owing either to concurrent infections or to the atypical presentations of some of the conditions.

162. A third method, the syndromic diagnosis of STI patients, was developed and promoted in a large number of countries in the developing world. It is based on the identification of consistent groups of symptoms and recognized signs (syndromes), and the provision of treatment that will deal with the majority of organisms or the most serious organisms responsible for producing the syndrome. The advantage of this method is that it is cheap, effective and provides immediate treatment, which in turn decreases transmission of infections and complications. However, the ability to treat as many infected individuals as possible needs to be weighed against the risk of over-treatment. To reduce the latter, the global WHO-recommended STI management guidelines need to be appropriately adapted to reflect national epidemiological situations.

163. Sexually transmitted infections cause serious morbidity and mortality in the world. The key components of STI control have been defined for many years. The treatment of STI is a highly cost-effective intervention. The challenge is to implement these demonstrated effective interventions to scale at country level.

VII. Human immunodeficiency virus/acquired immunodeficiency syndrome (HIV/AIDS)

164. Since the first clinical evidence of AIDS was reported two decades ago, HIV has generated an AIDS epidemic that has spread to every part of the world. At the end of 2001, an estimated 40 million people were living with HIV (table 10). The epidemic has proved devastating, AIDS having been the cause of death of a total of about 20 million people since the first clinical evidence of AIDS was reported in June 1981. In 2001, some 5 million people became infected globally, 800,000 of them children. Over the next decade, without effective antiretroviral treatment and care, they will join the ranks of those who have already died of AIDS.

165. Prevention campaigns are still missing too many young people. Recent surveys in 17 countries show that more than half the adolescents questioned could not name a single method of protecting themselves against HIV/AIDS (United Nations Children's Fund, 2000). In many HIV-affected countries, still less than 50 per cent of young people use condoms in relationships of risk, a proportion too low to drastically reduce the incidence of new HIV infections. More potent antiretroviral drugs and treatments for opportunistic diseases are being developed. Yet they remain out of reach for the vast majority.

Table 10
Regional HIV/AIDS statistics and features, end of 2001

Region	*Epidemic started*	*Adults and children living with HIV/AIDS*	*Adults and children newly infected with HIV*	*Adult prevalence rate[a] (percentage)*	*Percentage of HIV-positive adults who are women*	*Main mode(s) of transmission for adults living with HIV/AIDS*
Sub-Saharan Africa	Late 1970s-early 1980s	28 100 000	3 400 000	8.4	55	Hetero
Northern Africa and Western Asia	Late 1980s	440 000	80 000	0.2	40	Hetero, IDU
Southern and South-eastern Asia	Late 1980s	6 100 000	800 000	0.6	35	Hetero, IDU
Eastern Asia and the Pacific	Late 1980s	1 000 000	270 000	0.1	20	IDU, hetero, MSM
Latin America	Late 1970s-early 1980s	1 400 000	130 000	0.5	30	MSM, IDU, hetero
Caribbean	Late 1970s-early 1980s	420 000	60 000	2.2	50	Hetero, MSM
Eastern Europe and Central Asia	Early 1990s	1 000 000	250 000	0.5	20	IDU
Western Europe	Late 1970s-early 1980s	560 000	30 000	0.3	25	MSM, IDU
Northern America	Late 1970s-early 1980s	940 000	45 000	0.6	20	MSM, IDU, hetero
Australia and New Zealand	Late 1970s-early 1980s	15 000	500	0.1	10	MSM
Total		**40 million**	**5 million**	**1.2**	**48**	

Source: UNAIDS and World Health Organization, *AIDS Epidemic Update*, December 2001 (Geneva, December 2001).
Note: "Hetero" denotes heterosexual transmission; "IDU" denotes transmission through injecting drug use; "MSM" denotes sexual transmission among men who have sex with men.
[a] The proportion of adults 15-49 years of age living with HIV/AIDS in 2001, using 2001 population numbers.

The trends of the epidemic

166. Sub-Saharan Africa remains by far the worst affected region in the world. Approximately 3.4 million new infections occurred in 2001, bringing to 28.1 million the total number of people living with HIV. It is also the region where women living with HIV outnumber men. It is estimated that 2.3 million Africans died of AIDS in 2001.

167. Patterns of transmission vary, as do the segments of populations most at risk. In sub-Saharan Africa, the virus spreads mainly through heterosexual intercourse, in all social groups. Women's physiologic, social and economic vulnerability, however, contributes to their higher rates of infection in this region. Across the continent, an estimated 2.4 million children under age 15 were living with HIV at the end of 2001 — evidence that mother-to-child transmission is also claiming increasing numbers of lives. Indeed, the region is home to over 90 per cent of all children who became infected through mother-to-child transmission in 2001.

168. Uganda is the first African country to have turned a major epidemic around. Its extraordinary effort of national mobilization pushed the adult HIV prevalence rate in cities down from about 28 per cent in the early 1990s to less than 8 per cent in 2000. In parts of the United Republic of Tanzania and in Zambia, evidence is growing of a similar decline in HIV prevalence among young adults. In Western Africa, whereas Senegal has managed to keep HIV transmission to less than 2 per cent, Côte d'Ivoire is one of the 15 worst affected countries in the world, and the adult prevalence in populous Nigeria has passed 5 per cent.

169. Southern Africa currently has the highest rates of infection. In several countries, namely, Lesotho, Namibia, South Africa, Swaziland and Zimbabwe, at least 1 in 5 adults is HIV-positive. In Botswana, the adult prevalence rate is approaching 36 per cent, prompting the Government and the public to redouble their efforts to bring the epidemic under control. South Africa has renewed its efforts to contain the epidemic. In 2000, the HIV prevalence rate among pregnant women in South Africa rose to its highest level ever: 24.5 per cent, bringing to 4.7 million the total number of South Africans living with the virus.

170. In Latin America and the Caribbean, the spread of HIV is driven by a variety of factors, including unsafe sex between men and women, the main mode of transmission in the Caribbean and much of Central America. In Costa Rica and Mexico, infection rates are highest among men who have sex with men and, in Argentina, Brazil and Uruguay, they are highest among injecting drug users. Nevertheless, heterosexual transmission accounts for an increasing share of infections throughout the region.

171. In Latin American and Caribbean countries, about 1.8 million people are living with HIV/AIDS, including the 190,000 adults and children who became infected in 2001. In several Caribbean countries, HIV/AIDS has become a leading cause of death. Worst affected are Haiti and the Bahamas, where adult HIV prevalence rates are above 4 per cent. Brazil seems to be containing a potentially major heterosexual epidemic, thanks to its prevention efforts and extensive treatment and care programme.

172. Asia is seeing alarming increases in the number of infections. Seven million people are living with HIV/AIDS in Asia and the Pacific — a figure that is set to multiply manifold times unless concerted and determined measures to halt the epidemic are swiftly introduced.

173. In 2001, more than 1 million people became infected in Asia, with the adult HIV prevalence exceeding 2 per cent in Cambodia, Myanmar and Thailand. In Thailand, after an intensive national programme to increase condom use in commercial sex, the condom-use rate for brothel-based sex workers reached more than 90 per cent, sexually transmitted disease (STD) cases declined sharply and HIV prevalence among army conscripts dropped by more than one half. Given India's vast population, its prevalence rate of under 1 per cent nonetheless translates into 3.86 million people living with HIV/AIDS. Unsafe sex and drug-injecting practices largely account for rising prevalence rates. The recent steep rise in STIs in China and the vast in-country migration of people could unleash an epidemic.

174. Meanwhile, in Northern Africa and Western Asia, HIV infections are rising off a low base. Localized studies in Algeria and the Libyan Arab Jamahiriya, for instance, reveal prevalence rates of about 1 per cent among pregnant women. Across

the region, there were an estimated 80,000 new infections in 2001, bringing to 440,000 the number of people living with HIV/AIDS.

175. Infection rates are increasing in Eastern Europe and Central Asia, where overlapping epidemics of HIV, injecting drug use and STIs are swelling the ranks of people living with HIV/AIDS. Most of the quarter million people who became infected in 2001 were men — almost all injecting drug users living on the margins of society. In some parts of the region, more infections occurred in 2001 than in all previous years combined.

176. New epidemics have emerged in Estonia and Uzbekistan, while, in Ukraine, 240,000 people were living with HIV/AIDS in 1999. In 1996, only a few cities in the Russian Federation reported HIV cases; today, 82 of its 89 regions harbour the virus. The epidemic is still concentrated among injecting drug users and their sexual partners; but growing prostitution and high levels of STIs could cause it to spread rapidly into the general population.

177. Approximately 1.5 million live with HIV in high-income industrialized countries, many of them productively, thanks to pervasive antiretroviral therapy. However, that achievement is shadowed by the fact that prevention efforts are stalling in most industrialized countries: there is evidence that HIV incidence has not declined in the last five years.

178. In some countries, a new pattern is emerging, with the epidemic shifting towards poorer and younger people — especially ethnic minorities — who face disproportionate risks of infection and are more likely to be missed by prevention campaigns and deprived of access to treatment. The HIV prevalence rates among injecting drug users give cause for alarm: 18 per cent in Chicago and as high as 30 per cent in parts of New York. By contrast, needle and syringe exchange schemes in Australia have kept prevalence rates low among injecting drug users.

179. Infection rates in some Northern American cities are again rising among men who have sex with men. One urban United States study found a HIV prevalence of 7.2 per cent among this group (Valleroy and others, 2000). Also reported are sharp increases in sexually transmitted diseases among young men who have sex with men in Amsterdam — an indication that unsafe sex threatens to become the norm again. There are signs that unsafe sex between men might also be a growing factor in Eastern Europe's epidemic.

Challenges to young people's reproductive rights and reproductive health

180. On a global scale, a common pattern in all regions is the spread of the virus among young people between the ages of 10 and 24 years. An estimated 11.8 million young people (15-24 years) were living with HIV/AIDS at the end of 2001, 7.3 million (62 per cent) of whom were women and 4.5 million (38 per cent) were men. Table 11 presents regional breakdowns according to sex.

Table 11
Regional HIV/AIDS prevalence among young people aged 15-24, end of 2001

Region	*Young people living with HIV/AIDS*	*Percentage of HIV-positive young people who are women*
Sub-Saharan Africa	8 600 000	67
Northern Africa and Western Asia	160 000	41
South Asia	1 100 000	62
Eastern Asia and the Pacific	740 000	49
Latin America and the Caribbean	560 000	31
Central and Eastern Europe	430 000	35
Industrialized countries	240 000	33
Total	**11 800 000**	**62**

Sources: Joint United Nations Programme on Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome (HIV/AIDS) (UNAIDS) and United Nations Children's Fund.

181. Prevalence levels between men and women differ in some of the most affected countries. In many communities in Botswana, Cameroon and Kenya, the incidence of infection among young women could be as much as five to six times higher than the incidence among men their own age. In addition to greater biological susceptibility to HIV, a reason for higher infection levels among young women is that their sexual networks commonly consist of older men, who have had more sexual partners and are more likely to be HIV-positive. Furthermore, younger women are less likely to negotiate condom use or partner fidelity because of age differences, economic disparities and gender norms.

182. Reproductive health care plays a central role in AIDS prevention. The protection and application of the right to comprehensive, quality reproductive health-care services become extremely crucial as the HIV epidemic continues to spread fastest among young people and women.

183. Twenty years into the epidemic, a wealth of information has shown complex interactions of many factors that restrict the capacities of individuals and communities to protect themselves from HIV infection. These vulnerabilities, particularly demonstrated among young people, are discussed directly below.

Limited recognition of personal risk of HIV infection

184. In studies of nine African countries, among sexually experienced adolescent women and men aged 15-19 years, between 40 and 87 per cent of respondents in seven countries believed they had little or no risk of contracting AIDS. There is a prevalent belief, in most cases, that one is not at risk by having only one partner, owing to unawareness of other risk factors, such as sexual history and partners' having other partners.

Inadequate sexual health information and education

185. In the Caribbean and South America, surveys show that at least one third of young people have received little or no sex education, including information on

HIV. In all instances, young women knew less than young men — an indication of their lack of access to information and inability to have control over their sexual lives. In addition to having inadequate information, young people are not empowered with life skills that would enable them to act on their knowledge, increase decision-making in sexual encounters, and encourage responsible behaviour. Where provided, sexual health information and education are given after initiation of sexual activity, or in school settings which do not reach a great proportion of young women and men who may already have withdrawn from the formal education system.

Early sexual activity

186. Early initiation into sexual activity places adolescents at health risks. In 6 of 11 countries in Africa, almost 20 per cent of adolescent women had sexual relations before age 15 (Population Reference Bureau, 2001). In some of these countries, young women's early sexual activity occurs within or just before marriage, while young men's sexual experiences take place outside marriage. Global research indicates that sexual interactions of adolescent women under age 15 usually occur under pressure, as these women are particularly vulnerable to sexual coercion. Most young people do not use any form of contraception or protection against STIs during their first sexual experience, thus risking unplanned parenthood and STIs. Young women, who are biologically more vulnerable to STIs and HIV infection, will generally not be in a position to negotiate safer sex with their partners.

Inadequate youth health services

187. Reproductive health services have largely been oriented towards serving needs of pregnant married women. Consequently, young people, especially sexually active adolescent women and men, do not seek such services for reasons that include inconvenient schedules and locations, lack of privacy and confidentiality, fear of social stigma, judgemental attitudes of service providers, and unaffordable fees. Lack of access to health services becomes a serious threat to adolescent reproductive health, particularly of young women, owing to their physiological vulnerabilities to STIs. Most STIs are asymptomatic in females, and adolescents are often unaware of differences between normal and abnormal reproductive health conditions. Hence, they do not seek advice and care. The potential of health services as entry points for offering a package of youth-friendly reproductive health services that include voluntary counselling and testing, AIDS prevention education, STI control, and psychosocial support has not been optimized. In many developing countries, primary health-care systems are not designed to integrate such services, and service providers are unable to respond to special needs of young men and women owing to lack of training.

Unequal gender norms and relations

188. Social expectations of men and women profoundly affect their ability to protect themselves against HIV/AIDS and cope with its impact. For women, their vulnerabilities lie in denial of access to sexual information, restricted access to economic opportunities and autonomy, and multiple household and community roles. Men become vulnerable as well owing to social norms that encourage the double standards of male promiscuity and female monogamy, and support harmful beliefs that promote substance abuse and violence. Across all regions, coerced sex

and sexual favours in exchange for survival needs are common experiences among young women.

Economic and social marginalization

189. Young people who are socially and economically most disadvantaged are at the highest risk of HIV infection. Lack of education, poor general health, untreated STIs and sexual exploitation exacerbate the vulnerabilities of young people who live in poverty. In particular, young people who live or work on the streets subsist in extremely risky contexts, as they become easy prey to sexual exploitation, drug use and violence.

Impact of HIV/AIDS on family and community systems

190. Young people have been severely affected by the impact of the epidemic on families and communities. Not only is poverty an enabling environment of HIV, but HIV/AIDS can also lead to poverty, affecting particularly women and young people. In some sub-Saharan African countries, an estimated drop of 20 per cent in their wealth is estimated (British Broadcasting Corporation, 2001). On a microlevel, in Côte d'Ivoire, urban households that have lost at least one family member to AIDS have seen their incomes drop by 52-67 per cent, while their health expenditures soared fourfold. In Zambia, where family disposable income has fallen by more than 80 per cent, children are pulled out of school and expected to engage in various informal economy activities. Girls are more likely to be withdrawn from school to act as caregivers for sick family members or to provide economic support, including assuming responsibilities for subsistence production, a key role among women in rural areas. Weakened social support systems provided by families and the decreasing participation in formal education of young people, as a result of AIDS in the family, present additional vulnerabilities.

Linkages between reproductive health care and HIV/AIDS programmes

191. The targets agreed upon at the special session of the General Assembly on HIV/AIDS held in New York in June 2001 (Assembly resolution 26-S/2, annex) clearly highlight reproductive health care as a core component of AIDS prevention and care. Promoting the reproductive health and rights of young people remains controversial in many countries. Issues related to sexuality, traditions, and parental rights over duties towards young people within the domain of sexual behaviour are fraught with cultural and political sensitivities. What has become evident over two decades is that every aspect of reproductive health care has a strategic role to play in AIDS prevention and care. Components of special relevance to AIDS prevention are discussed directly below.

Coverage, delivery and content of sexual health education and information

192. Wide-scale information and skills-building programmes that involve public and private sectors are needed to match the epidemic's scale. They must use all avenues of education, engaging the strengths of community institutions, such as schools, local governments, churches and mass media. Uganda's effectiveness in reducing its HIV prevalence over a period of 10 years was largely due to preventive

education campaigns that mobilized leaders at all levels and in all sectors. Massive education campaigns also helped Brazil and Thailand make strong strides towards managing their epidemics.

193. Sexual health education should reach everyone, in particular young people, both in and out of school, and hard-to-reach groups, such as men who have sex with men, injecting drug users, mobile populations, and those in conflict and post-conflict situations. Though many sexual and reproductive health concerns are shared by both women and men, their needs differ according to their local customs and cultures, marital status, rural or urban residence, age, and living circumstances. It is necessary to target programmes according to these special needs.

STI prevention and care

194. Since the presence of STIs, particularly genital herpes (HSV2), increases a person's susceptibility to HIV, strengthening STI control can have a dramatic impact on lowering HIV transmission rates. To improve STI prevention and care for young people, detection and treatment procedures as well as condom promotion must be made essential components of primary health and HIV prevention programmes. Such integration would increase service reach to encompass pregnant women attending antenatal clinics, especially women with HIV; women availing themselves of family planning services; and women attending maternal and child health services. Experiences in STI case management indicate continuing challenges in: reducing community stigma as a constraint on health-seeking behaviours; equipping primary health services with rapid, simple and inexpensive diagnostic tests; making available effective and affordable drugs; and providing services for sexual partners, particularly men.

Family planning services

195. Providing family planning services within the broader scope of reproductive health, including AIDS prevention, will open up spaces for sexually active single young people and, in particular, for male participation. In addition, HIV counselling in family planning services enables provision of methods of dual protection (that is to say, protection against both pregnancy and HIV/STIs). Dual protection is an important issue both from a family planning perspective since the more common and effective pregnancy prevention methods (hormonal methods, IUDs and sterilization) do not offer protection against HIV/STIs, and as regards prevention of mother-to-child transmission of HIV. Family planning and HIV counselling services must explore with their clients the most appropriate dual protection method, given their sexual practices, means and social contexts.

Reproductive health needs of women and men living with HIV/AIDS

196. In countries with high HIV infection rates, large numbers of the adolescent population receiving educational messages are already HIV-positive. This reality requires a reorientation of programme content so that it addresses not only HIV prevention but also living with HIV including such issues as reducing transmission from HIV-infected individuals to the uninfected, avoiding reinfection with HIV/STIs, STI treatment, sexual relationships, and family planning. A challenge faced by family planning services is that HIV-positive women seldom reveal their

HIV status, and consequently providers are unable to extend the appropriate assistance.

Working with men

197. Engaging men as partners is a critical component in AIDS prevention and care, as in many contexts men are the decision makers in matters related to reproductive and sexual health. Interventions intended to empower women must be combined with efforts to involve men. Such initiatives need to include men's awareness of their own reproductive and sexual health needs, understanding of gender relations, and increasing health-seeking behaviours.

HIV prevention technologies: condoms and microbicides

198. Condom provision is a basic element in successful AIDS prevention. However, consistent and correct condom use among sexually active adolescents continues to be a major public-health challenge. While feasibility studies indicate increasing acceptance among both men and women, issues of cost and availability are obstacles to widespread use.

199. Topical microbicides are envisioned as expanding existing prevention options, particularly those within a woman's control. The search for an effective microbicide to prevent HIV transmission continues, although research and development efforts are hampered by funding constraints.

The way forward

200. The past two decades have taught the world that the HIV/AIDS epidemic is a global emergency. Curbing it calls for an extraordinary global response built on increased resources, improved coordination and the unprecedented commitment and initiative of leaders everywhere. The special session of the General Assembly on HIV/AIDS has elicited political and resource commitments. The Global AIDS and Health Fund, an initiative of the Secretary-General of the United Nations to mobilize support at the highest political levels, will provide a mechanism for channelling such commitments into wide-scale programmatic actions to control the epidemic. Success henceforth hinges on how well countries manage to govern their own responses.

VIII. Reproductive rights

201. The Programme of Action of the International Conference on Population and Development (United Nations, 1995a, chap. I, resolution 1, annex) provides a broad understanding of reproductive health. Paragraph 7.2 states that:

> "Reproductive health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity, in all matters relating to the reproductive system and to its functions and processes. Reproductive health therefore implies that people are able to have a satisfying and safe sex life and that they have the capability to reproduce and the freedom to decide if, when and how often to do so."

202. As the Programme of Action further notes:

> "Bearing in mind the above definition, reproductive rights embrace certain human rights that are already recognized in national laws, international human rights documents and other consensus documents. These rights rest on the recognition of the basic right of all couples and individuals to decide freely and responsibly the number, spacing and timing of their children and to have the information and means to do so, and the right to attain the highest standard of sexual and reproductive health. It also includes their right to make decisions concerning reproduction free of discrimination, coercion and violence, as expressed in human rights documents ... The promotion of the responsible exercise of these rights for all people should be the fundamental basis for government- and community-supported policies and programmes in the area of reproductive health, including family planning. As part of their commitment, full attention should be given to the promotion of mutually respectful and equitable gender relations and particularly to meeting the educational and service needs of adolescents to enable them to deal in a positive and responsible way with their sexuality" (para. 7.3).

Key issues with respect to reproductive rights

203. An important aspect of reproductive rights is the right of access to information and methods of family planning. A number of countries, including Brazil, Colombia, Guatemala, and South Africa, explicitly recognize, in their national Constitutions, a couple's right to freely and responsibly decide the number and spacing of their children. Moreover, over the years, there has been a steady increase in the proportion of Governments providing direct support to family planning services — from 63 per cent in 1976 to 75 per cent in 1999. Currently, 145 countries directly support the provision of contraceptives, and 34 provide indirect support (see table 12).

Table 12
Government policy towards access to contraceptive methods, by level of development, 1999
(Number of countries)

		Access not limited			
	Access limited	*Direct support*	*Indirect support*	*No support*	*Total*
World	1	145	34	13	193
Developed countries	1	23	20	4	48
Developing countries	0	79	8	7	94
Least developed countries	0	43	6	2	51

Source: Population Policy Databank maintained by the Population Division of the United Nations Secretariat.

204. Beyond the provision of services, the Programme of Action of the International Conference on Population and Development outlined a needs-based approach to family planning services. The Family Planning Association of Bangladesh, for

example, emphasizes a client-centred sexual and reproductive health approach that aims to increase male involvement, and targets such groups as youth, staff, volunteers, and religious and community leaders with sensitization campaigns and information and education programmes. Services also include immunization, oral rehydration, breastfeeding, literacy and nutrition. In some countries, however, such an approach remains a vague goal which has not been translated into policies and programmes.

205. Today's adolescents have different opportunities than their parents or even adolescents of a decade or two ago. School attendance is increasing around the world. With rising levels of education, work and career development opportunities, particularly in informational, professional, and technical fields, are expanding. At the same time, adolescents also confront challenges unique to this historic time. In addition to enhancing prospects for personal investment, earlier ages of puberty and later ages of marriage increase adolescents' exposure to the risk of sex, pregnancy, STIs and childbearing outside of the context of marriage. In certain contexts where HIV/AIDS and other STIs are prevalent, married adolescent girls may be particularly vulnerable because of their regular sexual exposure and their limited negotiating powers. Indeed, this is the first generation of adolescents who have grown up in a world with HIV/AIDS.

206. Several key issues in regard to the reproductive rights of adolescents pertain to marriage. Laws establishing a minimum age at marriage are nearly universal, with the most common minimum ages being 18 years for males and 16 years for females. However, despite legislation designed to eliminate the practice, girls in many countries marry shortly after puberty and are expected to start having children almost immediately, in part because of a lack of alternative opportunities. Many laws establish a minimum age at marriage that is set too low for women and is lower for women than for men, suggesting that women need fewer years to prepare for marriage, as their duties are expected to be confined to childbearing and domestic roles. Over the past two decades, more than 50 countries have altered their laws on the minimum legal age for marriage. However, age-at-marriage laws are often not enforced. In some parts of the world, such as in Africa, the legal age for marriage is often high, reflecting the tendency to adopt European legal standards, yet actual age at marriage remains low.

207. Adolescents' rights to health were first recognized internationally in the Convention on the Rights of the Child (General Assembly resolution 44/25, annex). Although the Programme of Action of the International Conference on Population and Development recognizes the rights of parents and guardians to provide, in a manner consistent with the evolving capacities of the adolescent, appropriate direction and guidance regarding reproductive health matters, it goes on to call for the protection and promotion of the rights of adolescents to information and services.

208. In areas where HIV is spread through heterosexual contact, the HIV/AIDS epidemic is relevant to reproductive rights in a number of ways, including the right to protect oneself from acquiring the disease and the rights of children who may become infected. Protection against STIs is a related and vitally important issue, since such diseases make men and women more susceptible to HIV.

209. The decision about when and under what circumstances to engage in sexual activity is often seen as the right of the husband. In such instances, women may

have little power to object to their husband's wishes, even if they suspect that their husband may have HIV/AIDS. Similarly, the right to use protection against HIV and STIs is also limited. Condoms — the cheapest and most effective method of protection — are considered, in many places, as appropriate for use during sex with a prostitute but not for use between spouses. STIs that cause ulcerative lesions are known to increase the probability of acquiring the HIV virus during sexual intercourse. Women, as the receptive partners, are particularly vulnerable to such infection.

210. Discrimination against women on the basis of gender may lead to additional burdens for the woman who has HIV/AIDS. For example, when women are denied the right to own property, a woman with HIV/AIDS or a woman whose husband has died of HIV/AIDS may be forced to leave her home and may have little legal recourse to reclaim the property (Center for Reproductive Law and Policy, 2000). In some Asian countries where the status of women is low, the gender dynamics of the epidemic are expected to contribute to its rapid spread (Crossette, 2001).

211. Reproductive rights include access to the full range of reproductive health-care services, among them the care that ensures that a woman gives birth to a healthy baby. Children become infected with HIV/AIDS in two ways: through transmission of the virus from their mothers or through sexual activity initiated during the teenage years. Mother-to-child transmission may occur during pregnancy, at childbirth, or while breastfeeding. Approximately 25-30 per cent of babies born to HIV-infected women acquire the virus from their mothers, and most of them do not survive for more than a few years. Although safe and effective drugs, such as nevirapine, are available that could substantially reduce the risk of giving birth to an HIV-positive baby, most women in developing countries have no access to such drugs.

212. Children, especially girl children, may also acquire HIV/AIDS when they are exposed to sexual activity at an early age. In addition to the health risks of early pregnancy and other risks associated with premature and unprotected sexual activity, teenagers now have the added risk of acquiring HIV/AIDS. Adolescents may have little or no access to information and counselling about HIV/AIDS and STIs, and may not be eligible for services.

213. Child prostitution, which is associated with extreme poverty and the dissolution of family life, is another violation of the rights of the child and another source of HIV infection. There is increasing concern about the number of homeless children and the growing incidence of child prostitution in some countries. One study found that a substantial proportion of street children had been sexually abused, often in return for accommodation and food (Kandela, 2000).

Reproductive rights and violence against women

214. The United Nations Declaration on the Elimination of Violence against Women (General Assembly resolution 48/104 of 20 December 1993) defines violence against women as any act of gender-based violence that results in, or is likely to result in, physical, sexual or psychological harm or suffering to women, including threats of such acts, coercion or arbitrary deprivation of liberty, whether occurring in public or in private life (article 1). Violence includes battering, sexual abuse of female children, marital rape, traditional practices harmful to women, sexual

harassment and intimidation at work, trafficking in women and forced prostitution. The issue of gender-based violence has been the subject of considerable discussion in the field of population since the concept of reproductive rights gained currency. The main focus of these discussions has often been limited to domestic violence and such traditional cultural behaviours as female genital mutilation and honour killing.

215. Gender-based violence often begins at early ages. During childhood, preferential allocation of family resources to male children may impact negatively on the health of girls. Such resources may include food, medical care and schooling. Recent studies have found that gender discrimination is not systematically directed against girls in most countries, but there is evidence that boys are favoured in the use of health services in some Asian countries (United Nations, 2000b).

216. Domestic violence is the most common form of gender-based violence, and as women enter marriage — often as adolescents and in some instances without their consent — domestic violence may become a problem. This is particularly true in cases where the husband is considerably older than his wife and where local custom recognizes the husband as the dominant partner. Violence against women also occurs in other situations where women are unable to exercise their right to fair treatment. Such situations include sexual exploitation of women refugees, rape as a weapon of war, trafficking in women for sex work, and discrimination against widows.

217. Because violence against women is frequently rooted in the unequal power between men and women, the most effective countermeasure over the long term is continued progress towards the empowerment of women (Heise, Ellsberg and Gottemoeller, 1999). This means equal education opportunities for girls, and for women, more control over their resources, economic independence and greater decision-making power.

218. Approximately 2 million women and girls are at risk of undergoing some form of female genital mutilation every year (World Health Organization, 2000a). This procedure, sometimes called female circumcision, is usually performed on young girls or adolescents approaching marriage age, and it typically occurs outside the medical system. It involves partial or total removal of the external female genitalia or other injury to the female genital organs. About 4 out of 5 cases involve excision of the clitoris and the labia minora; 15 per cent involve infibulation, the most extreme form of the practice. Female genital mutilation is known to be practised in about 30 countries of Africa and a few countries of Western Asia. It has also been reported among immigrant communities in Europe, Northern America, Australia and New Zealand. In some countries — for example, Djibouti, Egypt, Eritrea, Mali and Somalia — more than 90 per cent of women have undergone the procedure (United Nations, 2000c).

219. The reasons most often cited for practising female genital mutilation are to maintain social acceptance and to protect the reputations of girls. In some areas, girls are not considered marriageable unless they have been circumcised. The Demographic and Health Surveys found that more than 70 per cent of women support the practice in countries where prevalence is high. Even women who opposed female genital mutilation chose to have their daughters undergo the procedure because of community pressure and the influence of older family members (United Nations, 2000c).

220. The United Nations General Assembly has adopted several resolutions calling upon Governments to eradicate female genital mutilation, and some countries have passed legislation to ban the practice. In 1994, Ghana became the first African nation to outlaw female genital mutilation; it was followed by Burkina Faso, Côte d'Ivoire and Senegal. Uganda adopted a new Constitution in 1995, which states that "laws, cultures, customs or traditions that are against the dignity, welfare or interest of women or that undermine their status are prohibited by this Constitution" (Center for Reproductive Law and Policy, 2000). In the Kapchorwa district of Uganda, a project has greatly reduced the incidence of female genital mutilation by separating the practice itself from the cultural values it was intended to support and by proposing alternative activities to sustain those ideals. Local community leaders were involved at all stages of the process, and awareness workshops were held for all sectors of the community. In 1996, female genital mutilation dropped by 36 per cent (Chekweko, 1998).

221. An extreme form of gender-based violence, which is intended mainly to control women's sexuality, is known as honour killing. Honour killings occur in many countries of Western and South Asia. A woman who is raped or who voluntarily engages in sex outside marriage is considered to have defiled the family name. In some cases, the woman or girl may be only suspected of shameful or dishonourable behaviour, but the allegation is enough to dishonour the family. The only way to "cleanse" the family honour is for a male relative to kill the offending woman or girl. In some countries, the law allows honour killing, but even where it is not explicitly permitted, the crime may not be prosecuted. For example, the Penal Code of Jordan exempts from any penalty a man who kills, wounds or injures a female relative who has committed adultery. A similar exemption exists in Syrian law. In Pakistan, hundreds of women are killed each year for such crimes as adultery, fornication, breaking an arranged marriage or attempting to obtain a divorce (Center for Reproductive Law and Policy, 2000).

222. A study of female homicide in Alexandria, Egypt, found that 47 per cent of all women killed had been murdered by a relative after they had been raped. Honour killings are also reported in Lebanon and Yemen. It is estimated that several hundred Asian women die every year as a result of honour killings (Heise, Ellsberg and Gottemoeller, 1999), but reliable statistics are unavailable. Since honour killing is considered a family concern, such deaths are rarely reported and do not appear in official statistics. Some women are able to flee abroad when they are threatened with violence at the hands of their male relatives, and international support for women at risk is growing. Canada has recognized fear of honour killing as grounds for asylum since 1997, and two women from Pakistan were granted refugee status in the United Kingdom of Great Britain and Northern Ireland in 1999 because their fear of being killed by their families was deemed to constitute a well-founded fear of persecution.

Conclusion

223. The Programme of Action adopted at the International Conference on Population and Development in 1994 produced expansive definitions of reproductive rights and reproductive health. It also focused attention on gender equality, equity and empowerment of women. The following year, the Fourth World Conference on Women held in Beijing affirmed the principle of women's human rights and called upon Governments to promote and protect women's rights including their reproductive rights, and to remove obstacles that prevented the achievement of these rights.

224. Much progress has been made in establishing the basis for reproductive rights, but much remains to be accomplished in translating these rights into policies and programmes. Although many countries have begun to implement the agreements reached at the International Conference on Population and Development, others — particularly low-income countries — do not have sufficient resources to offer comprehensive health services. The broad international consensus reached at the Conference and the continued endorsement of the concepts of reproductive rights and reproductive health at the five-year review of the implementation of the Programme of Action of the International Conference on Population and Development make it likely that reproductive rights will be a major focus of population policies in the future.

Notes

[1] Unsafe abortion is defined as a procedure for terminating an unwanted pregnancy carried out either by persons lacking the necessary skills or in an environment lacking the minimal medical standards or both (based on World Health Organization, *The Prevention and Management of Unsafe Abortion*, report of a Technical Working Group (Geneva, April 1992) (WHO/MSM/92.5)).

[2] Pregnancies have been estimated as the sum of births and abortions for a given calendar year. Because of lack of reliable information, pregnancies that end in spontaneous foetal loss (miscarriages and still births) are omitted. As a result, the total number of pregnancies, and thus the pregnancy rate, will be underestimated.

[3] The World Health Organization recommends that the term "sexually transmitted disease" (STD) be replaced by the term "sexually transmitted infection" (STI). The term "sexually transmitted infections" has been adopted, as it better incorporates asymptomatic infections. In addition, the term has been adopted by a wide range of scientific societies and publications.

[4] The World Health Organization has defined adolescents as persons in age group 10-19, while youth have been defined as persons in age group 15-24. Young people constitute a combination of these two overlapping groups covering age group 10-24 years.

References

Abbasi-Shavazi, J. (2001). Below-replacement fertility in Iran: progress and prospects. Paper presented at the International Union for the Scientific Study of Population (IUSSP) Seminar on International Perspectives on Low Fertility: Trends, Theories and Policies, Tokyo, 21-23 March 2001.

AbouZahr, Carla (1998). Maternal mortality overview. In *Health Dimensions of Sex and Reproduction*, Global Burden of Disease and Injury Series, vol. III, C. J. L. Murray and A. D. Lopez, eds. Cambridge, Massachusetts: Harvard School of Public Health on behalf of World Health Organization and World Bank.

AbouZahr, C., E. Ahman and R. Guidotti (1998). Puerperal sepsis and other puerperal infections. In *Health Dimensions of Sex and Reproduction*, Global Burden of Disease and Injury Series, vol. III, C. J. L. Murray and A. D. Lopez, eds. Cambridge, Massachusetts: Harvard School of Public Health on behalf of World Health Organization and World Bank, p. 205.

Agoestina, T., and A. Soejoenoes (1989). *Technical Report on the Study of Maternal and Perinatal Mortality, Central Java Province*. Republic of Indonesia, Coordinating Board of Indonesian Fertility Research (BKS PENFIN)/Ministry of Health.

Alan Guttmacher Institute (1998). *Into a New World: Young Women's Sexual and Reproductive Lives*. New York: Alan Guttmacher Institute.

Arno, J., and others (1994). Age and clinical immunity to infections with Chlamydia trachomatis. *Sexually Transmitted Diseases* (Philadelphia), vol. 21, No. 1, pp. 47-52.

Atrash, H., S. Alexander and C. Berg (1995). Maternal mortality in developed countries: not just a concern of the past. *Obstetrics and Gynecology* (New York), vol. 86, No. 4 (February).

Barge, S., and others (1998). *Availability of Abortion Services in Rural Government Clinics in Four States of India*. Baroda, Gujarat, India: (Baroda, Gujarat) Centre for Operations Research and Training.

Becker, Stan (1993). The determinants of adolescent fertility with special reference to biological variables. In *Biomedical and Demographic Determinants of Reproduction*, Ronald Gray, Henri Leridon and Alfred Spira, eds. Oxford, United Kingdom: Clarendon Press, pp. 21-49.

Berglund, T., H. Fredlund and J. Giesecke (2001). Epidemiology of the re-emergence of Gonorrhoea in Sweden. *Sexually Transmitted Diseases* (Philadelphia), vol. 28, pp. 111-114.

Blanc, Ann (2000). *The Relationship Between Sexual Behavior and Level of Education in Developing Countries*. Geneva: UNAIDS.

Blanc, Ann K., and Ann Way (1998). Sexual behaviour and contraceptive knowledge and use among adolescents in developing countries. *Studies in Family Planning* (New York), vol. 29, No. 2 (June), pp. 106-116.

Bongaarts, John, and Judith Bruce (1995). The causes of unmet need for contraception and the social content of services. *Studies in Family Planning* (New York), vol. 26, No. 2 (March/April), pp. 57-75.

Bongaarts, J., and G. Feeney (1998). On the quantum and tempo of fertility. *Population and Development Review*, vol. 24, No. 2, pp. 271-291.

Borisenko, K. K., L. I. Tichonova and A. M. Renton (1999). Syphilis and other sexually transmitted infections in the Russian Federation. *International Journal of STD & AIDS*, vol. 10, No. 10 (October), pp. 665-668.

Bozon, M. and E. Enoch (1999). Brésil: la transition démographique rapide d'un pays hétérogène. *Population et Sociétés* (Bulletin mensuel d'information de l'Institut national d'études démographiques), No. 345 (avril).

Bozon, M., and O. Kontula (1998). Sexual initiation and gender in Europe: a cross-cultural analysis of trends in the twentieth century. In *Sexual Behaviour and HIV/AIDS in Europe*, M. Hubert, N. Bajos and Th. Sandfort, eds. London: UCL Press, pp. 37-67.

British Broadcasting Corporation (2001). AIDS tops African agenda (August).

Brown, Elisabeth, and Alfred Dittgen (2000). Fertility of married and unmarried couples in Europe. Paper presented at the Fertility and Family Surveys Flagship Conference: Partnership and Fertility. A Revolution? Brussels, Belgium, 29-31 May 2000.

Bumpass, Larry L., and Hsien-Hen Lu (2000). Trends in cohabitation and implications for children's family contexts in the United States. *Population Studies* (London), vol. 54, No. 1 (March), pp. 29-41.

Bunnell, R. E., and others (1999). High prevalence and incidence of sexually transmitted diseases in urban adolescent females despite moderate risk behaviour. *Journal of Infectious Diseases* (Chicago), vol. 180, No. 5, pp. 1624-1631.

Burstein, G. R., and others (1998). Incident Chlamydia trachomatis infections among inner-city adolescent females. *Journal of the American Medical Association*, vol. 280, No. 6, pp. 521-526.

Carr, Dara, Ann Way and R. Smith (2001). *Youth in Sub-Saharan Africa: A Chartbook on Sexual Experience and Reproductive Health.* Washington, D.C.: Population Reference Bureau.

Center for Reproductive Law and Policy (2000). *Reproductive Rights 2000: Moving Forward.* New York.

Chekweko, Jackson (1998). Creating necessary conditions for implementing sexual and reproductive health and rights. In *Ensuring Reproductive Rights and Implementing Sexual and Reproductive Health Programmes.* UNFPA Expert Round Table Meeting, Kampala, Uganda, 22-25 June 1998.

Chowdhury, Sameena, and others (2000). Nutritional status and age at menarche in a rural area of Bangladesh. *Annals of Human Biology* (London), vol. 27, No. 3 (May-June), pp. 249-256.

Contreras, Juan M., José M. Guzmán and Ralph Hakkert (2001). Uso de anticonceptivos en adolescents. In *Diagnóstico Sobre Salud Sexual y Reproductiva de Adolescentes en América Latina y el Caribe*, José M. Guzmán and others eds. Mexico City, Mexico: United Nations Population Fund, pp. 129-142.

Cook, R. L., and others (1999). Screening for Chlamydia trachomatis infection in college women with a polymerase chain reaction assay. *Clinical Infectious Diseases*, vol. 28, No. 5, pp. 1002-1007.

Cothe, M. F., and others (1997). Trichomonas vaginalis associated with low birth weight and pre-term delivery. *Sexually Transmitted Diseases*, (Philadelphia), vol. 24, pp. 353-360.

Cronberg, S. (1993). The rise and fall of sexually transmitted disease in Sweden. *Genitourinary Medicine* (London), vol. 69, pp. 184-186.

Crossette, Barbara (2001). In India and Africa, women's low status worsens their risk of AIDS. *The New York Times* (26 February).

De Browere, V., R. Tonglet and W. Van Lerberghe (1998). Strategies for reducing maternal mortality in developing countries: what can we learn from the history of the industrialised West? *Tropical Medicine and International Health*, vol. 3, No.10, pp. 771-782.

Demissie, K., and others (2000). *Perinatal Health Indicators for Canada.* Ottawa, Canada: Canadian Perinatal Surveillance System.

De Vos, Susan (2000). Nuptiality in Latin America. In *Till Death Do Us Part: A Multicultural Anthology on Marriage*, Sandra L. Browning and Robin R. Miller, eds. Stamford, Connecticut: JAI Press.

Dittus, Patricia J., James Jaccard and Vivian V. Gordon. (1997). The impact of African American fathers on adolescent sexual behavior. *Journal of Youth and Adolescence* (New York), vol. 26, No. 4 (August), pp. 445-465.

Duncan, E. M., and others (1990). First coitus before menarche and risk of sexually transmitted disease. *The Lancet* (Baltimore, Maryland; and London), vol. 335, pp. 338-340.

Fleming, D. T., and others (1997). Herpes simplex virus type 2 in the United States, 1976-1994. *New England Journal of Medicine* (Boston, Massachusetts), vol. 337, No. 16, pp. 1105-1111.

Gage, Anastasia J. (1998). Sexual activity and contraceptive use: the components of the decision-making process. *Studies in Family*

Planning (New York), vol. 29, No. 2 (June), pp. 154-166.

——— Dominique Meekers (1994). Sexual activity before marriage in Sub-Saharan Africa. *Social Biology* (Port Angeles, Washington), vol. 41, No. 1-2 (spring/summer), pp. 44-60.

Gomez, Victor M. (1993). *Los padres, la educación y las relaciones sexuales premaritales de los hijos*. Encuesta Nacional de Salud Reproductiva de Adultos Jóvenes. San José, Costa Rica: Caja Costarricense de Seguro Social, Departamento de Medicina Preventiva, Programa Salud Reproductiva.

Graham, Wendy, William Brass and Robert W. Snow (1989). Estimating maternal mortality: the sisterhood method. *Studies in Family Planning* (New York), vol. 20, No. 3 (May-June), pp. 125-135.

Greenwood, A. M., and others (1987). A prospective study of the outcome of pregnancy in a rural area of the Gambia. *Bulletin of the World Health Organization*, vol. 65, pp. 635-643.

Grimes, David A. (2000). Reducing complications of unsafe abortion: the role of medical technology. Paper presented at the Meeting on Priorities and Needs in the Area of the Unsafe Abortion, United Nations Development Programme/United Nations Population Fund/World Health Organization/ World Bank, Geneva, 28 and 29 August 2000.

Guillaume, Agnès, and others (1999). *Le recours à l'avortement. La situation en Cote d'Ivoire*. Abidjan: École nationale supérieure de statistique et d'économie appliquée (ENSEA) and Institut de recherche pour le développement (IRD), Études et Recherches, No. 27.

Guzmán, J. M., and others (2001). *Diagnóstico sobre Salud Sexual y Reproductiva de Adolescentes en América Latina y el Caribe*. México, D.F.: UNFPA.

Harrison, Abigail, and, others (2000). Barriers to implementing South Africa's Termination of Pregnancy Act in rural KwaZulu/Natal. *Health Policy and Planning* (Oxford), vol. 15, No. 4.

Heise, Lori, K. Moore and N. Toubia (1995). *Sexual Coercion and Reproductive Health: A Focus on Research*. New York: The Population Council.

Heise, Lori, Mary Ellsberg, and Megan Gottemoeller (1999). Ending violence against women. *Population Reports*, Series L, No. 11. Baltimore, Maryland: Johns Hopkins University School of Public Health, Population Information Program.

Henshaw, Stanley K., and others (1998). The incidence of abortion in Nigeria. *International Family Planning Perspectives* (New York), vol. 24, No. 4, pp. 156-164.

Henshaw, Stanley, Susheela Singh and Taylor Haas (1999a). The incidence of abortion worldwide. *International Family Planning Perspectives* (New York), vol. 25, No. Special (January), pp. S30-S38.

——— (1999b). Recent trends in abortion rate worldwide. *International Family Planning Perspectives* (New York), vol. 25, No. 1. (June), pp. 44-48.

Huntington, Dale (2000). Meeting Women's Health Care Needs after Abortion. *Program Brief No. 1*. Washington, D. C.: Population Council/FRONTIERS.

———, and others (1998). The postabortion caseload in Egyptian hospitals: A descriptive study. *International Family Planning Perspectives* (New York), vol. 24, No. 1 (March), pp. 25-31.

Hutchinson, M. Katherine, and Teresa M. Cooney (1998). Patterns of parent-teen sexual risk communication: Implications for intervention. *Family Relations*, vol. 47, No. 2 (April), pp. 185-94.

Indriso, Cynthia, and Axel I. Mundigo, eds. (1999). *Abortion in the Developing World*. London: Zed Books; and New Delhi: Vistaar Publications.

Jejeebhoy, Shireen J. (1995). *Women's Education, Autonomy and Reproductive Behaviour: Experience from Developing Countries*. Oxford, United Kingdom: Clarendon Press.

Kamali, A., and others (1999). Seroprevalence and incidence of genital ulcer infection in a rural Ugandan population. *Sexually Transmitted Infections*, vol. 75, pp. 98-102.

Kandela, Peter (2000). Marrakesh: child prostitution and the spread of AIDS. *The Lancet* (Boston,

Massachusetts; and London), vol. 356, No. 9246 (9 December), p. 1991.

Kiernan, Kathleen E. (1999). Cohabitation in Western Europe. *Population Trends* (London), No. 96 (summer), pp. 25-32.

Kishor, Sunita, and Katherine Neitzel (1996). *The Status of Women: Indicators for Twenty-Five Countries*. Demographic and Health Surveys Comparative Studies, No. 21. Calverton, Maryland: Macro International.

Klijzing, Erik, and Miroslav Macura (1997). Cohabitation and extra-marital childbearing: early FFS evidence. In *Proceedings of the International Population Conference, Beijing, 11-17 October 1997*, vol. 2. Liège, Belgium: International Union for the Scientific Study of Population, pp. 885-901.

Konaté, Mamadou Kani, and others (1999). Radioscopie d'une pratique controversée. Les consequences sanitaires et sociales de l'avortement provoqué dans le district urbain de Bamako. *Pop Sahel* (Bamako), No. 27 (May).

Krone, M. R., and others (2000). Herpes simplex virus type 2 shedding in human immunodeficiency virus-negative men who have sex with men: frequency, patterns, and risk factors. *Clinical Infectious Diseases*, vol. 30, No. 2, pp. 261-267.

Laga, M., and others (1993). Non-ulcerative sexually transmitted diseases as risk factors for HIV-1 transmission in women: results from a cohort study. *AIDS* (Philadelphia), vol. 7, pp. 95-102.

Lesthaeghe, R., and P. Willems (1999). Is low fertility a temporary phenomenon in the European Union? *Population and Development Review*, vol. 25, No. 2, pp. 211-228.

Lloyd, Cynthia, and Barbara Mensch (1999). Implications of formal schooling for girls' transitions to adulthood in developing countries. In *Critical Perspectives on Schooling and Fertility in the Developing World*, Caroline H. Bledsoe and others, eds. Washington, D.C.: National Academy Press.

Magun, V. S. (1998). *Revolution of Aspirations and Changing of Youth Life Strategies*. Moscow: Institute of Sociology of the Russian Academy of Sciences.

McCauley, Ann P., and Cynthia Salter (1995). Meeting the needs of young adults. *Population Reports*, Series J, No. 41. Baltimore, Maryland: Johns Hopkins School of Public Health, Population Information Program.

McDonald, P. (1994). Marriage, family formation, living arrangements and household composition in low fertility countries. In *Low Fertility in East and Southeast Asia: Issues and Policies*. Seoul: Korea Institute for Health and Social Affairs, pp. 61-89.

McFarlane, Carmen P., Jay S. Friedman and Leo Morris (1994). *Contraceptive Prevalence Survey, Jamaica, 1993: Executive Summary, Main Findings of the Survey*. Atlanta, Georgia: United States Department of Health and Human Services.

Mensch, Barbara S., Judith Bruce and Margaret E. Greene (1998). *The Uncharted Passage: Girls' Adolescence in the Developing World*. New York: The Population Council.

Morabia, Alfredo, and Michael C Costanza (1998). International variability in ages at menarche, first live birth, and menopause. *American Journal of Epidemiology* (Baltimore, Maryland), vol. 148, No. 12 (December), pp. 1195-1205.

Obasi, A., and others (1999). Antibody to herpes simplex virus type 2 as a marker of sexual risk behaviour in rural Tanzania. *Journal of Infectious Diseases*, vol. 179, No. 1, pp. 16-24.

Popov, Andrej A., Adriaan Ph. Visser and Evert Ketting (1993). Contraceptive knowledge, attitudes and practices in Russia during the 1980s. *Studies in Family Planning* (New York), vol. 24, No. 4 (July/August), pp. 227-240.

Population Reference Bureau (2001). *The World's Youth 2000*. Washington, D.C.: Population Reference Bureau.

Quilodrán, Julieta (1999). Quand l'union libre n'est pas un phénomène nouveau. *Cahiers Québécois de Démographie* (Montreal), vol. 28, No. 1-2 (spring/fall), pp. 53-80.

Robey, Bryant, John Ross and Indu Bhushan (1996). Meeting unmet need: new strategies. *Population Reports*, Series J, No. 43. Baltimore, Maryland: The Johns Hopkins University.

Ross, John A. (2001). Contraceptive and reproductive health commodity needs to the year 2015: developing world. Paper presented at the Technical Consultation Meeting on Ensuring Essential Health Commodity Security through South-South Collaboration, Kerala, India, 12-15 June.

Royston, Erica, and Sue Armstrong, eds. (1989). *Preventing Maternal Deaths*. Geneva: World Health Organization.

Rutenberg, N., and J. M. Sullivan (1991). Direct and indirect estimates of maternal mortality from the sisterhood method. In *Proceedings of Demographic and Health Surveys World Conference, Washington, D.C., 5-7 August 1991*, vol. III. Columbia, Maryland: International Research Development Macro International, Inc.

Singh, Susheela, and Deirdre Wulf (1994). Estimated levels of induced abortion in six Latin American countries. *International Family Planning Perspectives* (New York), vol. 20, No. 1.

Singh, Susheela, and Renee Samara (1996). Early marriage among women in developing countries. *International Family Planning Perspectives* (New York), vol. 22, No. 4 (December), pp. 148-157.

Singh, Susheela, and others (1997). Estimating the level of abortion in the Philippines and Bangladesh. *International Family Planning Perspectives* (New York), vol. 23, No. 3 (September), pp. 108-115.

——— (2000). Gender differences in the timing of first intercourse: data from 14 countries. *International Family Planning Perspectives* (New York), vol. 26, No. 1 (December), pp. 21-28.

Thiriat, Marie-Paul (1999). Les unions libres en Afrique subsaharienne. *Cahiers Québécois de Démographie* (Montreal), vol. 28, No. 1-2 (spring/fall), pp. 81-115.

Thomas, Frédéric, and others (2001). International variability of ages at menarche and menopause: patterns and main determinants. *Human Biology* (Detroit, Michigan), vol. 73, No. 2 (April), pp. 271-290.

United Nations (1975). *Report of the United Nations World Population Conference, 1974, Bucharest, 19-30 August 1974*. Sales No. E.75.XIII.3.

——— (1984). *Report of the International Conference on Population, 1984, Mexico City, 6-14 August 1984*. Sales No. E.84.XIII.8 and corrigenda.

——— (1988). *Adolescent Reproductive Behaviour*, vol. I, *Evidence from Developed Countries*. Population Studies, No. 109. Sales No. E.88.XIII.8.

——— (1989). *Adolescent Reproductive Behaviour*, vol. II, *Evidence from Developing Countries*. Population Studies, No. 109/Add.1. Sales No. E.89.XIII.10.

——— (1990). *Patterns of First Marriage: Timing and Prevalence*. Sales No. E.91.XIII.6.

——— (1995a). *Report of the International Conference on Population and Development, Cairo, 5-13 September 1994*. Sales No. E.95.XIII.18.

——— (1995b). *Women's Education and Fertility Behaviour: Recent Evidence from the Demographic and Health Surveys*. Sales No. E.95.XIII.23.

——— (1996). *Report of the Fourth World Conference on Women, Beijing, 4-15 September 1995*. Sales No. E.96.IV.13.

——— (1998). *World Population Monitoring, 1996: Selected Aspects of Reproductive Rights and Reproductive Health*. Sales No. E.97.XIII.5.

——— (1999a). *Review and Appraisal of the Progress Made in Achieving the Goals and Objectives of the Programme of Action of the International Conference on Population and Development: 1999 Report*. Sales No. E.99.XIII.16.

——— (1999b). International Forum for the Operational Review and Appraisal of the Implementation of the Programme of Action of the International Conference on Population and Development: note by the Secretary-General transmitting the report of the Forum. E/CN.9/1999/PC/3.

——— (2000a). *Levels and Trends of Contraceptive Use as Assessed in 1998*. Sales No. E.01.XIII.4.

——— (2000b). World population monitoring, 2000: population, gender and development. ESA/P/WP.159.

——— (2000c). *The World's Women 2000: Trends and Statistics*. Social Statistics and Indicators, No. 16. Sales No. E.00.XVII.14.

——— (2001a). *World Population Prospects: The 2000 Revision*, vol. I, *Comprehensive Tables*. Sales No.E.01.XIII.8.

——— (2001b). *Abortion Policies: A Global Review*, vol. I, *Afghanistan to France*. Sales No. E.01.XIII.10.

——— (2001c). *Abortion Policies: A Global Review*, vol. II, *Gabon to Norway*. Sales No. E.01.XIII.18.

——— (2002). World population monitoring 2002: reproductive rights and reproductive health. ESA/P/WP.171.

——— (forthcoming). *Abortion Policies: A Global Review*, vol. III, *Oman to Zimbabwe*.

UNAIDS (2000). Report on the Global HIV/AIDS Epidemic, June 2000. Geneva.

——— (2001). *AIDS Epidemic Update: December 2001*. Geneva.

United Nations Children's Fund (1999). *Women in Transition*. The UNICEF Regional Monitoring Project (MONEE) for Central and Eastern Europe/Commonwealth of Independent States/Baltics. Regional Monitoring Report, No. 6. Florence, Italy: UNICEF International Child Development Centre.

——— (2000). *The State of the World's Children, 2000*. New York. Sales No. E.00.XX.1.

——— (2001). *Early Marriage: Child Spouses*. Innocenti Digest, No. 7. Florence, Italy: UNICEF and Innocenti Research Centre.

United Nations Population Fund (2001). *Population Issues: Briefing Kit 2001*. New York.

Valleroy, L. A., and others (2000). HIV prevalence and associated risks in young men who have sex with men. *Journal of the American Medical Association*, vol. 284, No. 2 (12 July), pp. 198-204.

Van de Kaa, D. J. (1999). Europe and its population: the long view. In *European Populations: Unity in Diversity*, European Studies in Population, vol. 6: European Population Conference, vol. 1, D.Van de Kaa, and others, eds. Dordrecht, Netherlands: Kluwer Academic Publishers, pp.1-49.

Webb, Douglas (2000). Attitudes to "Kaponya Mafumo": the terminators of pregnancy in urban Zambia. *Health Policy and Planning* (Oxford), vol. 15, No. 2.

Westoff, Charles F., and Akinrinola Bankole (1995). *Unmet Need: 1990-1994*. Demographic and Health Surveys Comparative Studies, No. 16. Calverton, Maryland: Macro International, Inc.

World Bank (1993). *World Development Report, 1993: Investing in Health*. New York: Oxford University Press.

World Health Organization (1986). *Young people's Health: A Challenge for Society*. Report of a WHO Study Group on Young People and "Health for All by the Year 2000". WHO Technical Report Series, No. 731. Geneva.

——— (1987). *Studying Maternal Mortality in Developing Countries: A Guidebook*. Geneva. WHO/FHE/87.7.

——— (1991). Infertility: A tabulation of available data on prevalence of primary and secondary infertility. WHO/MCM/91.9.

——— (1992a). *The Prevention and Management of Unsafe Abortion*, report of a Technical Working Group, Geneva (April). WHO/MSM/92.5.

——— (1992b). *International Statistical Classification of Diseases and Related Health Problems: Tenth Revision*. Geneva.

——— (1998). *Unsafe Abortion. Global and Regional Estimates of Incidence of and Mortality Due to Unsafe Abortion with a Listing of Available Country Data*, 3rd ed. Geneva (July). WHO/RHT/MSM/97.16.

——— (1999). *Reduction of Maternal Mortality: A Joint WHO/UNFPA/UNICEF/World Bank Statement*. Geneva.

——— (2000a). *Female Genitalia Mutilation*. WHO Fact Sheet, No. 241.

——— (2000b). *Emergency Contraception*. WHO Fact Sheet, No. 244.

——— (2001a). Sexual relations among young people in developing countries: Evidence from WHO case studies. Geneva. WHO/RHR/01.08.

——— (2001b). *Guidelines for the Management of Sexually Transmitted Infections*. Geneva.

World Health Organization/Joint United Nations Programme on Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome (HIV/AIDS) (UNAIDS) (1997). *Sexually Transmitted Diseases: Policies and Principles for Prevention and Care*. Geneva.

Wyshak, G., and R. Frisch (1982). Evidence for a secular trend in age at menarche. *The New England Journal of Medicine* (Boston), vol. 306, No. 17 (April), pp. 1033-1035.

Xenos, Peter, and others (2001). The timing of union formation and sexual onset: Asian evidence from Young Adult Reproductive Health Surveys. East-West Center Working Paper, No. 108-4, (September). Population Series. Honolulu: Hawaii.

Zabin, Laurie, and Karungari Kiragu (1998). The health consequences of adolescent sexuality and fertility behaviour in Sub-Saharan Africa. *Studies in Family Planning* (New York), vol. 29, No. 2 (June), pp. 210-232.